

Engineers in Association

**The first 50 years of the
Association of Consulting
Engineers Australia**

1951 - 2001



**The Association of
Consulting Engineers
Australia**

Engineers in Association

The First 50 Years of the Association of Consulting Engineers Australia: 1951 - 2001

This book is dedicated to the thousands of people - Presidents, Committee Members, Executive Members, Board Members, the corporate and state membership, management, staff, stakeholders and suppliers and to the large, medium and small firms who have contributed to the success of the ACEA over the last 50 years.

We gratefully acknowledge the submission of material for this publication from the following people:

Max Anderson, Eric Brier, Grahame Campbell, Ben Fink, Roy Hardcastle, Peter Hein, Dick Kell, John Laurie, Dale McBean, John Miles, Peter Miller, Roger Olds, David Singleton, Jack Wynhoven, Ray Young.

We thank the following people for their assistance in reviewing the draft text and providing additional input to the publication:

Max Anderson, Ken Bond, Grahame Campbell, David Singleton, Jack Wynhoven, Therese Charles, Megan Motto.

Research Assistant: Kerry Ridgway

Proof Reader: Karla Whitmore

Writing, Editing and Design: John Ridgway:
Ridgway Public Relations and Engineering

Copyright 2001: The Association of Consulting Engineers Australia.

Foreword



David Singleton
President:
The Association of
Consulting Engineers
Australia

At the onset of a new century it is appropriate to look back and reflect on the first 50 years of the Association of Consulting Engineers Australia.

Over the last century, consulting engineering has made major contributions to the development of Australian industry and has enhanced the living standards of communities both nationally and internationally. With the passage of time, memories grow dim and information tends to disappear. It is therefore hoped that through this publication, at least some of the many contributions made to the growth and development of the ACEA and the consulting engineering profession generally will survive and serve as a tribute and guidance for future decision makers in the industry.

This publication demonstrates how the ACEA over its 50 year history, but particularly in the last few years, has responded to changes in the environment. Sometimes we did so with the innovation and focus that our members try to exemplify in their own firms. At other times we didn't do so well, but we have always tried to respond to issues and changes in the best interest of our members and the industry.

The measure of how the ACEA has developed over the years is largely reflected in its success in responding to external challenges and issues. In 2001, globalisation and change are the critical issues, and our responses to these challenges will determine not only the future of the ACEA, but also the success of the consulting engineering industry in Australia. Throughout our history perhaps no other issue has had so profound an effect on our industry. Our future history will show how the ACEA and the industry responded to the challenge of adapting to the needs of a growing and diverse world engineering community.

The material prompts us to reflect on the contributions of individuals and firms. The strong support of our individual members and member firms has been the foundations on which the organisation has been built. The publication of this history allows us to extend our thanks and appreciation of the efforts and dedication of those people, named and unnamed herein, who have gone before.

In future years, we look forward to adding further chapters which reflect a bright and prosperous future for our firms and the industry.

Introduction

**John Ridgway: Editor
Ridgway Public Relations and
Engineering
November 2001**

It has often been said that one of the hardest tasks for engineers is to sit down and write technical reports. Engineers are better at talking and reflecting on the past, which perhaps explains their ready enthusiasm for providing much of the material for this book. We acknowledge and thank all those who contributed their time and resources.

In approaching this project, we have defined the objective as not so much a history, but more a collection of key issues and forces, both internal and external, which have influenced the way in which the Association and the consulting engineering profession have responded and developed over the years. This is supported with personal perspectives, recollections and anecdotal opinions provided by many of the ACEA Past Presidents - the people at the 'coal face' - whose efforts and responses directly helped to shape the Association's destiny.

This approach may doubtless have its critics and lead to some vigorous debate on issues, but it more effectively captures the essence of the times and may be of much more value in helping to discuss future trends and strategies.

Within this brief and scope, it is not possible to cover in detail every significant event. Nor is it possible to individually pay tribute by name to the thousands of people including committee members, member firms and representatives, staff and executive, suppliers and representatives of associated organisations, whose efforts over the years have helped to shape the ACEA.

The intent is therefore not to produce a chronological and definitive history, but rather a reflection on the changing cultures of the ACEA and the diversity of issues it has faced during its first 50 years.

Contents

	Page
Foreword: David Singleton, President of the ACEA	1
Introduction: John Ridgway, Editor	2
Chapter 1	
Consulting Engineering Prior to the ACEA	5
Consulting Engineering in Australia in the early 20 th Century	5
The Consulting Engineer Panels of the Institution of Engineers Australia	5
The Association of Consulting Structural Engineers of NSW	6
The Need for an Association of Engineering Employers	6
Chapter 2	
Formation and Development of the ACEA	7
The ACEA is formed in 1951	7
The ACEA Begins as a NSW-Based National Organisation	8
Safeguarding Members' Business Interests	9
The ACEA Joins the International Consulting Engineering Community	9
State Branches of the ACEA are Formed	10
Recognition and Independence	10
The ACEA Assists with the Formation of Building Industry Organisations	11
Contractual Disputes in the Early 1960s	11
Chapter 3	
Image and Corporate Practice in the 60s and 70s	13
Communications with Members and the Marketplace	13
Engineering Awards Competition is Introduced in 1968	14
Changes in the 1970s: Corporate Practice Accepted	15
Chapter 4	
The Trade Practices Act	16
The ACEA and the Trade Practices Act: Six Years of Representation and Argument	16
Trade Practices Decision and Appeal: After the Dust had Settled	17
The ACEA in Tradepracticeland	17
The Ongoing Effects of the Trade Practices Act on the Industry	18
Chapter 5	
Increased Industry Recognition in the 1970s and 80s	19
A Gift to the Nation	19
1977: The Silver Jubilee Year	19
Campaigning Nationally for the Use of Australian Consulting Engineers	19
Into the 1980s and the Desktop Computer Age	20
The Debate on Limited Outside Ownership of Member's Firms	21
Growing International Cultural Co-operation	21
Recognition of Consultant Selection Based on Merit	22
Improving Business Management	22
Increasing Competition from Corporatised Government	23

Contents (continued)

	Page
Chapter 6	
Continuing Interaction with Government and the Marketplace in the 1990s	25
Surviving a Recession: A New Task Force Structure and Strategic Plan	25
Training Initiatives in the Early 1990s	26
The Launch of CIDA	26
'Fightback' and the Proposed GST	27
The ACEA's Increased Profile and Recognition	27
Changing the Emphasis by Redefining and Re-engineering	27
Increased Interaction with Government and Industry	28
Qualification-Based Consultant Selection	28
Membership Qualifications Changed	29
Input to Government Inquiries and Decisions	29
The Global Marketplace of the 1990s	30
Global Issues Affecting Australian Consultants in the 1990s	31
Increasing Litigation and the Engineering Profession	31
The Large Firms Group	32
The Small Firms Group	32
 Chapter 7	
Restructuring for Globalisation and a New Millennium	33
Corporate Restructuring for a Changing World: Meeting the Needs of Globalisation	33
The Way Forward	34
Major Organisational and Cultural Changes: Broadening Membership Criteria	35
Board Changes and the Strategic Plan	37
Consulting Services for the Sydney 2000 Olympics	37
 Chapter 8	
The ACEA in 2001	39
Trends in Consulting Engineering in 2001	39
Operating and International Service Business from Australia	40
The Australian Consulting Engineering Industry in Retrospect	41
New Membership Support Structure and Culture for a New Millennium	43
 Appendix 1: ACEA Presidents: 1951 to 2001	44
Appendix 2: Acronyms and Abbreviations	45
Appendix 3: Bibliography and References	46

Chapter 1

Consulting Engineering Prior to the ACEA

Consulting Engineering in Australia in the Early Twentieth Century

Practicing independent consulting engineers were relatively few in number in Australia when the Institution of Engineers Australia (IE Aust) was formed in 1919. Most consulting engineers became members of the IE Aust, either independently or through their membership of a number of state-based engineering societies which joined the Institution under a common federal Constitution.

In 1921 the IE Aust appointed a committee to report on a scale of fees for consulting engineers and in 1926 a scale of fees for all branches of engineering was adopted. This was based on either a commission on the actual or estimated cost of the works, or on time-based charges ranging from one guinea an hour for recently established consulting engineers to three guineas for those of established 'high professional standing'. However, the issue of the relationship between salary and status for engineering services continued to re-surface from time to time.

Consulting Engineer Panels of the IE Aust

About the time of Alexander Gibson's Presidency, the IE Aust became further involved with an equitable system of professional fees for consulting engineers.

In 1934 Consulting Engineer Panels were established within the IE Aust various state divisions. Each State Panel dealt with local issues including those between the professions and government departments who were starting to engage consultants for engineering works. To coordinate this work, a committee comprising representatives of each panel met annually with the secretary of the IE Aust to form the Federal Committee of Consulting Engineers Panels.

As a result of the work by the panels in 1934, the IE Aust published the *Consulting Engineers Code* which was established as the accepted guide to the practice of consulting engineering in Australia. The 1934 Code, like that of 1926, specified a principal scale of fees for all branches of engineering and was based on a percentage of all relevant works.

Consulting Engineer Panels of the IEAust (continued)

This Code, with amendments, remained current until 1964 when it was replaced by the new ACEA document entitled *Conditions of Engagement and Scales of Minimum Charges*.

It is interesting to note that the then Melbourne Division Consulting Engineers Panel promoted the idea, in 1938, of the formation of an Association of Consulting Engineers within the Institution. They also proposed the publication of a Handbook and Directory, revisions to the 1934 Statement on Professional Practice and Charges for Consulting Engineers and the adoption of a revised Code of Ethics. These matters were placed on hold during the war years, but discussions continued with architects on the relationship between the two professions, resulting in a formal scheme for nominating and engaging consulting engineers in 1945.

The Association of Consulting Structural Engineers of NSW

Alex W. Morrison, a practising Sydney consulting engineer, made an unsuccessful attempt in 1924 to form an association amongst seven consulting structural engineers to help to eliminate inconsistencies in the methods of charging professional fees. Further informal discussions continued for a number of years until, in July 1933, the ACSE was finally registered and incorporated in NSW.

The ACSE became a highly active and respected organisation, but provided a specialised service to only a small proportion of future potential ACEA members. When the ACEA was formed later in 1952, various proposals were put forward to maintain close working relationships between the ACEA and the ACSE. When, in 1963, the ACEA set out to prepare its new *Terms of Engagement and Scales of Minimum Charges*, a major



disagreement between Melbourne and Sydney-based structural engineers had to be resolved. While Sydney engineers adopted the ACEA's Code, their Melbourne counterparts charged lower fees but provided less detailed design services. The ACSE helped to provide a solution to this problem.

In 1968, during R. L. Atkinson's Presidency, the ACEA Secretary reported that an Agreement had been reached between the ACSE and the NSW Chapter of the ACEA to permit the ACSE to become the Structural Branch of that Chapter. The two organisations have since operated as closely associated entities, with the ACSE remaining a corporate body under its own Memorandum and Articles of Association and sharing the ACEA NSW Branch Secretariat. Over the years, a number of ACEA office bearers, including presidents, have served as Board members of the ACSE.

The Need for an Association of Engineering Employers

In 1951 a log of industrial claims concerning salary rates and conditions of employment was served on a number of the largest Australian consulting engineering businesses by the Association of Professional Engineers, Australia (APEA).

Out of a need for a common voice for the consulting engineering profession, it was considered inadvisable for businesses to respond individually to the log of claims. Although the IE Aust had previously become involved with arbitration cases, the Institution was concerned over the implications of potential internal conflict arising from handling issues relating to both employer and employee interests within its own professional ranks.

Chapter 2

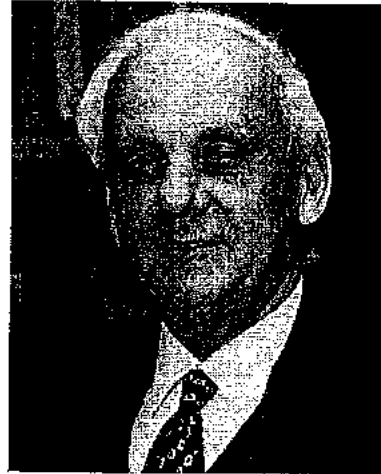
Formation and Development of the ACEA

Minutes of First Annual General Meeting of the Association of Consulting Engineers held at Science House 157 Gloucester St Sydney at 3.15 pm on Wednesday 25th November 1953.

Extract from Minute Book of the first Annual General Meeting of the ACEA on 25th November 1953

The ACEA Is Formed in 1951

To address the APEA log of claims issues, members of the IE Aust Sydney Consulting Engineers Panel met in 1951 to discuss the formation of an Australia-wide employer association of consulting engineers. The meeting agreed to the formation of an association, to be known as the Association of Consulting Engineers Australia (ACEA) and to proceed with the preparation of a set of rules providing for membership on an individual business basis.



Awdry Julius, first President of the ACEA

Former ACEA President M. B. V. (Max) Anderson is one of the few surviving members of that era and recalls that, between 1950 and 1961, he attended meetings of the IE Aust Sydney Consulting Engineers Panel and early ACEA meetings as the Sydney office-based representative of W. E. Bassett and Associates of Melbourne, one of the organisations affected by the 1951 log of claims.

Max Anderson says that critical organisational challenges during the 1950s and early 1960s were focused on the need to accelerate the membership of the ACEA from an unintentionally NSW-centred body into a strong national organisation, capable of defending industrial claims from the APEA in the Arbitration Courts.

The ACEA appears to have been officially established in October 1952, with Awdry Julius, a partner in the firm Julius Poole & Gibson, elected as its first President. In following his father's lead, Awdry made important contributions to the Standards Association of Australia (SAA) and was heavily involved with the activities of the Institution of Engineers, Australia. He was Chairman of the Sydney Division in 1940, remained an active member of the ACEA's Federal Council until 1965 and was Chairman of the NSW Chapter Committee from 1967 to 1970.

In commenting on issues of the time in the 1989 Julius Poole and Gibson book *From Tote to Cad*, Awdry Julius said, "All sorts of people were calling themselves consulting engineers - university professors, trade companies and unqualified operators."

Formation and development of the ACEA (continued)

"As a profession we needed to be able to police this, by having an exclusive list of firms that were eligible to be members of a governing body. The ACEA could say to clients and the public that our members are qualified to operate as consulting engineers in accordance with the statutes of the governing body."

For over a decade, until 1963, the IE Aust Consulting Engineers Panels and the Association continued to work side by side, one looking after ethical matters, including fee scales, the other the industrial relations affairs.

The ACEA Begins as a NSW-Based National Organisation

The first recorded meeting of the ACEA took place in a lecture room in Science House, Gloucester Street, Sydney on 29 May 1953 under the Chairmanship of Awdry Julius, with K. A. Bond as Secretary. There were 11 members present, 4 apologies, and amendments to the Rules of the Association were adopted. Governance of the ACEA was by a Committee of Management, headed by the President, who agreed to inform the APEA that 'the draft agreement on the Log of Claims submitted by them was unacceptable and that the Association did not wish to undertake further negotiations at that stage.'

The first Annual General Meeting of the Association took place on 25 November 1953 at Science House under the Chairmanship of A. W. Morrison, a founding member of both the ACSE and the ACEA, who was elected as the ACEA President from 1954 to 1956. Items for discussion included the need for the widening of ACEA activities and increasing the membership.

Industrial relations and legal services became available to the newly formed

'For over a decade, until 1963, the IE Aust Consulting Engineers Panels and the Association continued to work side by side, one looking after ethical matters including fee scales, the other the industrial relations affairs.'

Association when the ACEA Committee of Management agreed to join the Metal Trades Employers Association (MTEA) in February 1954. The MTEA traditionally represented member interests in industrial relations matters including Arbitration Court proceedings.

Letters suggesting membership of the ACEA were sent by the Committee of Management to members of the IE Aust consulting engineers panels in all states in February 1954. By September 1955, total membership was 44, almost exclusively from Sydney except for five interstate businesses who had been served with the original APEA log of claims.

In looking back to that time, a typical consulting engineer's office of the 1950s echoed to the sound of constant clatter from iron-framed typewriters and mechanical adding machines, with engineers manually calculating in units like inches, feet, yards, pounds and tons. Offices were generally cluttered with drawing boards at which draughtspersons or engineers would manually draw conceptual or final engineering drawings in ink or pencil on linen or tracing paper for printing on to blueprints or dyeline paper. Cost estimates, fees and wages were calculated manually in pounds, shillings and pence and England dominated Australia's trade and culture.

Safeguarding Members' Business Interests

The APEA log of claims was in the Arbitration Court in October 1957. The Association negotiated an amicable outcome which resulted in a Consent Award, and as a result of this, was seen as an important new professional group who could safeguard and promote the business needs of consulting engineers. Part of this safeguard was the need to establish uniform guidelines for fees, and in 1960, the ACEA decided to adopt the Consulting Engineers Code of the IE Aust as the basis of professional fees for members' consulting engineering services.

By the time of R. F. McAskill's Presidency in the late 1950s, whilst still working closely with the IE Aust Panels, the ACEA had achieved notable successes and recognition in its pursuit of strategies which were principally directed towards safeguarding the business interests of its members. It had successfully addressed industrial relations issues, established membership eligibility based on qualifications and business practice and developed a uniform and binding scale of professional fees for members. Although industrial relations issues directly prompted the formation of the ACEA, it was the unique community of interest shared by the independent practitioners that led to its rapid development.

The ACEA Joins The International Consulting Engineering Community

Strong recognition of the ACEA came in 1958 during K. A. Bond's Presidency when the Committee of Management agreed that the Association should formally apply to become a member of FIDIC (The International Federation of Consulting Engineers). Membership of FIDIC was announced in 1959 and the ACEA then became one of the early member associations of FIDIC in its modern post - World War II era.

R.M. Little was the first member to represent the Association at a FIDIC annual meeting, the venue in 1961 being in Zurich. Thereafter, the ACEA has been regularly represented at FIDIC annual conferences and other activities. Representing the ACEA in Copenhagen in 1965, Awdry Julius and Max Anderson successfully moved that FIDIC should employ a permanent secretary to improve communications with its geographically expanding membership.

Australian consulting engineers have always been regarded as world class and this was emphasised by the choice of Sydney as the host for the 1971 and 1994 meetings of FIDIC. The 1971 meeting was only the second time that FIDIC had met outside Europe. In 1983, FIDIC confirmed its regard for Australian engineers when former ACEA President Dr Peter Miller was elected to the Federation's Presidency. His appointment was the first time a President was elected from a practice outside Europe or North America. Peter Hein is a former member of the FIDIC Executive, and representation has continued to this day, with ACEA member and former President Dick Kell being a current Executive member and President Elect from 2003.

The ACEA has also maintained a long and close association with the Association of Consulting Engineers New Zealand (ACENZ), and with other FIDIC member associations through the multinational activities of FIDIC regional committees and bilateral arrangements such as trade delegations and international visits.

Over the years, the membership of FIDIC and other international organisations has established strong links with the international engineering community and with overseas industry organisations. Many members therefore tend to travel overseas to attend international conferences on behalf of the ACEA, or to keep in touch with trends and developments in engineering throughout the world to assess their likely impact on Australian industry. Some members actively market and export Australia's

Chapter 2: Formation and Development of the ACEA

The ACEA Joins the International Consulting Engineering Community (continued)

engineering skills and compete successfully for a range of consulting assignments overseas, often against strong international competition. Through its representations to government, the ACEA has been a strong and successful advocate for the use of Australian consulting engineers on international projects.

State Branches of the ACEA are Formed

Major progress was achieved in the development of the ACEA into a national organisation during F. G. Hole's Presidency from 1960 to 1962. Draft rules for the formation of ACEA Branches were approved for circulation to members in 1961 and interstate membership of the ACEA had increased to an extent where, according to the meeting minutes of the time, 'it became feasible to establish an ACEA Branch or Chapter in Melbourne, Victoria in 1962'. The first Victorian committee members appointed were B. J. Callinan and R. L. Atkinson. At the same time, views were being expressed that the ACEA should gradually take over from the IE Aust Consulting Engineers Panels.

A Committee of Management meeting in Sydney in May 1960 resolved that the control of the Association as a whole would be by a 'Federal' Committee of Management who would control the various State branches. This Committee 'would determine the overall policy of the Association, prepare rules for the guidance of branches and investigate the formal steps necessary to form a branch. In 1962 the decision was taken to completely redraft the Association's Rules to take account of state Chapters and to provide for the changing national character of the Association.

Authorisation was given at a meeting of the ACEA Council on 12 August 1963 for the formation of Chapters in Queensland, South Australia and Western Australia. The inaugural meeting of the newly created NSW Chapter in 1963 elected G. I. Davey as Chairman and P. B. Docker as Honorary Secretary.

Tasmanian membership of the Association was through the Victorian Chapter for a number of years until October 1966 when the ACEA Secretary reported that, 'as there are now five members in Tasmania, they could form a Chapter.' A subsequent meeting of Tasmanian members appointed H. England as Chairman and Mr Strom as Acting Secretary. The Association achieved representation in every Australian State and Chapters were subsequently formed in the Northern Territory in 1980 and the Australian Capital Territory in 1988.

Recognition and Independence

By 1963, during Max Anderson's Presidency, the ACEA was quickly gaining recognition in its own right from the IE Aust, industry and government organisations. The IE Aust was satisfied to see the work of the Consulting Engineers Panels taken over by the ACEA and decided to cease the publication of its Consulting Engineers Code, thereby paving the way for the ACEA to restructure and position itself as an independent organisation.

In the same year the ACEA had more than 100 members including 35 from outside NSW and, with its new independence from IE Aust, recognised the urgent need to develop new documents specific to the needs of its consulting engineering members. These documents included revised Corporate Rules, Rules for Branches, Terms of Engagement and a Code of Ethics.

Max Anderson recalls that most of this intensive work was handled by sub committees which included many of the then current past presidents and vice presidents including the late Gerry Cardno who was ACEA President from 1964 to 1966 and a strong advocate for corporate practice for members.

The ACEA Assists with the Formation of Building Industry Organisations

ACEA activities in Sydney, supported by the ACSE, were influential in meeting construction industry challenges by assisting with the formation of a number of inter-professional organisations of private sector organisations within the building industry.

In 1963 the ACEA joined with the Royal Australian Institute of Architects (RAIA) and the Institute of Quantity Surveyors to form a Joint Committee of Architects, Engineers and Quantity Surveyors of NSW. The Committee met regularly to discuss measures which might alleviate the industry difficulties. Shortly afterwards, the Sydney Division of the Master Builders Association joined the Committee and it evolved into the Building Industry Advisory Council of NSW (BIAC).

Dr Peter Miller says that these bodies encouraged the formation of the Building Industry Subcontractors Organisation and the Building Owners and Managers Association (BOMA). When governments stepped in to form the National Public Works Conference (NPWC) and joined in these activities to form the Building Industry Construction Council, a hitherto unachievable measure of cohesion came to the Australian building industry.

The BIAC entered into discussions with the NSW Department of Public Works, and out of this interaction, the idea of forming a National Building and Construction Council (NBCC) emerged. Its formation triggered the establishment of the National Public Works Conference. The first joint NBCC/ NPWC meeting took place in Hobart in 1974 and was the first of regular meetings which ultimately led to a 'place at the table' for NBCC in the annual pre-budget discussions which were a feature of the Fraser Federal Government.

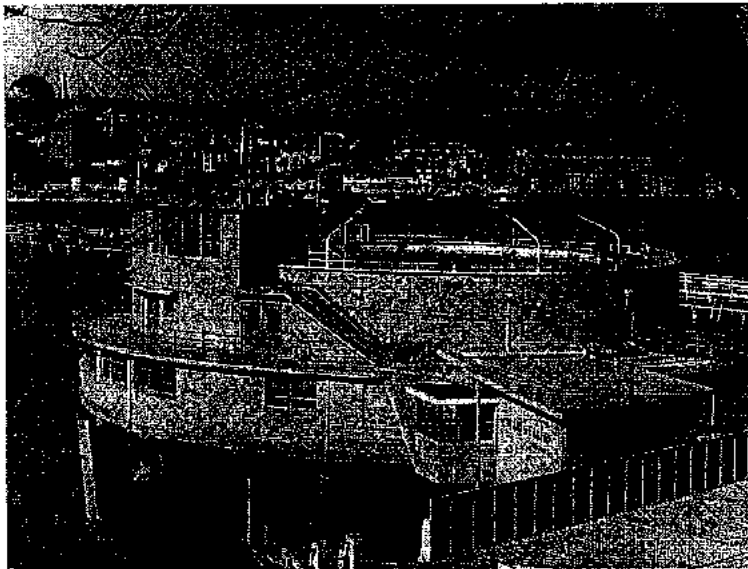
Industrial Development and Contractual Disputes in the Early 1960s

Max Anderson says that for most members, the busy period of ACEA development through the 1960s coincided with heavy office work loads resulting from a great expansion in building construction and industrial development in Australia.

Major challenges for the ACEA emerged in the early 1960s when the construction industry was beset by a rapid increase in disputation over contracts.

Former ACEA President Dr Peter Miller says that this had its genesis in an unfortunate conjunction of rapidly rising inflation, which more than doubled, and an order of magnitude change in the size of projects. This led to severe cost overruns, primarily because the increased size of projects extended construction time so much that the contractors could not estimate the effect of inflation and thus commit to a firm price. This led to the so-called 'rise and fall' provisions into contracts and a rapid increase in the use of nominated sub-contractors. Disputes and litigation rose dramatically.

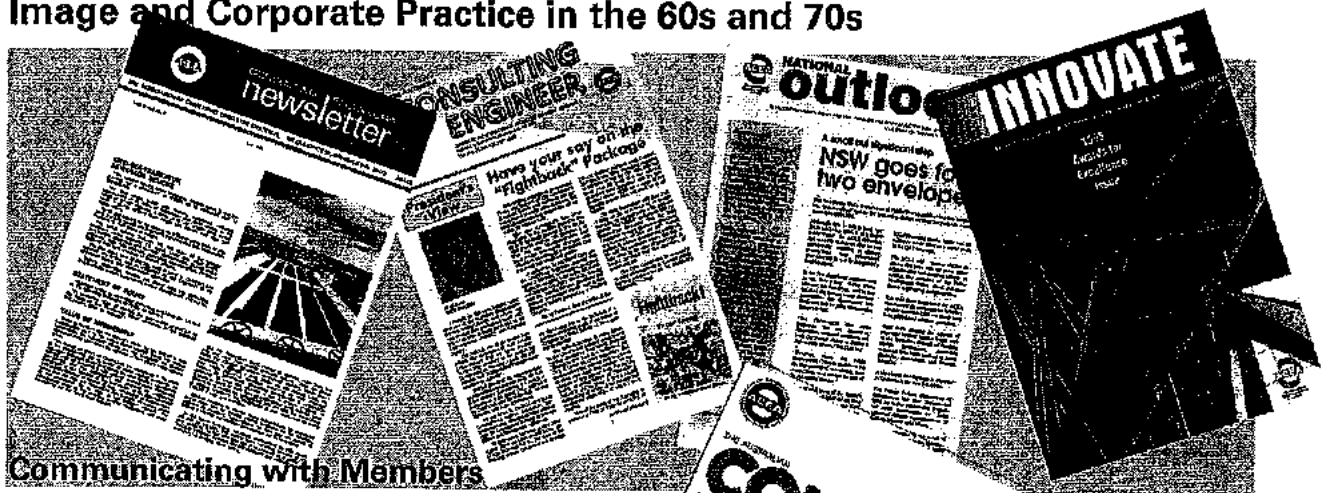
'the busy period of ACEA development through the 1960s coincided with heavy office work loads resulting from a great expansion in building construction and industrial development in Australia.'



Projects of the 1960s completed by Gutteridge Haskins & Davey Pty Ltd (GHD)
(top) Manly Marineland (1960)
(bottom) Adelaide Swimming Centre, (1969)
Photos courtesy of GHD

Chapter 3

Image and Corporate Practice in the 60s and 70s



Communicating with Members and the Marketplace

At a meeting of the ACEA Executive Committee in 1963, the idea of a newsletter to members was placed on the agenda by G. Cardno. At this time, meeting minutes were mailed to members as the principal means of communication within the organisation.

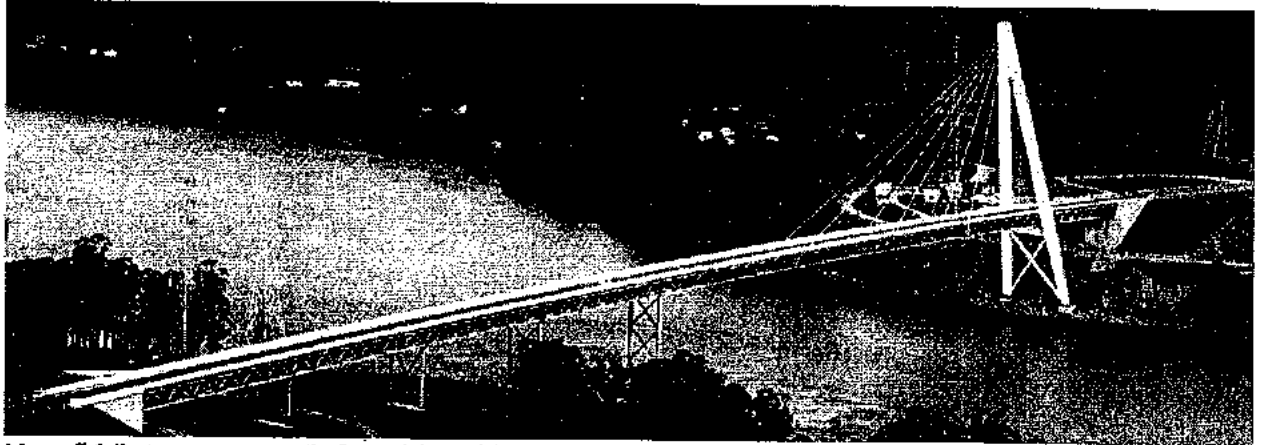
Newsletter No. 1 appeared in 1964 and was a typed sheet, prepared by the ACEA President, edited by the Secretary and circulated to members from the ACEA's Sydney office at 161 Clarence Street. As its membership and resources grew, the ACEA was able to promote the corporate interests of its members through the *Consulting Engineers Newsletter New Series No 1* which first appeared in October 1967 as a professionally typeset publication. The first edition contained an item on a pre-stressed concrete parking deck designed by Sydney consultants Miller Milston and Ferris.

Designed principally to promote engineering achievements, services and new developments to the marketplace, the *Consulting Engineers' Quarterly* was first published in September 1969. The publication provided a showcase for the annual ACEA Engineering Excellence Awards and, in 1969, featured the first award – the John Batman Bridge project in Tasmania, designed by Maunsell and Partners. In 1972 the *Quarterly* was incorporated into a new publication, *The Australian Consulting Engineer* and a name

change to *The Consulting Engineer* occurred when the ACEA moved to level 12 at 75 Miller Street North Sydney in December 1993 and adopted its new logo and revised corporate image. This publication continued until 1995.

Chief Executive Officer, Geoff Crittenden, welcomed readers to the first edition of *Innovate*, the new official journal of the ACEA, in October 1995. Geoff said that *Innovate* 'will show how consulting engineers' solutions create wealth for the community. Not just buildings, roads and earthworks....but industrial processes, plant and equipment installations.'

As a means of divorcing ACEA business issues from mainstream marketing, information for members only was contained in a separate typed newsletter which was published on a monthly basis from the late 1960s. This became the *National Newsletter* in 1974, was changed to *Corporate News* in November 1993 and



Mawnsell & Partners were among the first recipients of the ACEA Engineering Excellence Awards in 1968 for their design of the John Batman Bridge in Tasmania. Photo: ACEA Archives

Communicating with Members and the Marketplace (continued)

in 2001 is circulated electronically to members via the internet as *National Outlook*.

The ACEA launched its new interactive website as part of its 'Way Forward' strategic plan in 1998. In announcing the website, ACEA President Grahame Campbell said that consulting engineering firms have responded to technological and telecommunications change very quickly.

"Readers are encouraged to visit the website at www.acea.aust.com and learn more about the consulting engineering capabilities of Australia's leading professional engineering firms. The specialities and breadth of services available throughout the ACEA membership has expanded rapidly through the 90s, as global competition and an increasingly international client base has internationalised the profession and has promoted a culture of world's best practice."

Engineering Awards Competition is Introduced in 1968

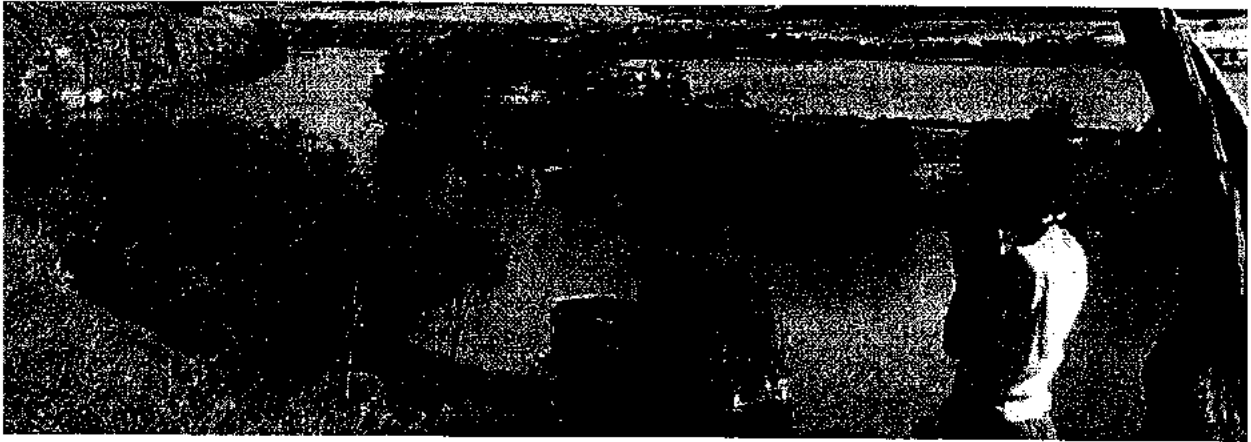
The desire to demonstrate the high standards of Australian consulting engineers led to the introduction of the

ACEA Engineering Awards competition in 1968. The scope and variety of members' activities in the early years of the competition was illustrated by the winning projects which included: Batman Bridge, Launceston; Oil Wharf, Westernport, Victoria; Expansions and Modernisation: Newcastle Grain Terminal; Murray Valley Salinity Study; Glass Walls of the Sydney Opera House; Paterson Bridge, Launceston; Anglo-Australian Optical telescope – Building and Dome, Siding Spring Observatory.

In 1975 the competition was revised to provide for Awards in the various fields of engineering and to recognise both large and small projects. In addition, the Award of Special Merit was introduced to recognise outstanding engineering.

The year 1992 saw the introduction of the President's Award for promoting the ACEA. The Award was designed to recognise and commend the efforts of the individuals or member firms that 'promotes greater awareness of the ACEA and its objectives and enhances the image of the ACEA as an important body within the business and professional community of Australia.'

Possible synergies with the IE Aust Engineering Excellence Awards and the introduction of new category of Community Award for 2001 was discussed at a meeting of the ACEA Board in July 2000.



The Engineering Excellence Award for 1971 was won by consulting engineers Gutteridge Haskins & Davey Pty Ltd for their study of salinity build-up in the Murray Valley. Photo: ACEA Archives

Corporate Practice Accepted: Changes in the 1970s

Until 1968 both the Institution of Engineers Australia and the ACEA held strongly to the view that consulting engineers should not engage in corporate practice as limited liability companies. This position was considered necessary to preserve the high status of the profession and was reflected in the ACEA's Code of Practice and Rules for Membership which were drafted accordingly. Individuals carried the full financial responsibility for operating their businesses and, as projects became larger, it became increasingly difficult to accumulate financial reserves for a continuing practice and to provide for retirement through savings and adequate superannuation.

During the late 1960s the ACEA was under increasing pressure, particularly from larger firms, to alter the rules to allow for corporate practice. Following industry and legal advice, it was subsequently realised that the rules could be devised to ensure that both the technical and financial control of an incorporated firm could remain in the hands of qualified engineers who would then become directors instead of partners, but remain legally responsible for their work. In reflecting this change in the early 1970s, new rules allowed member firms to change their constitutions to provide for practice as limited liability companies.

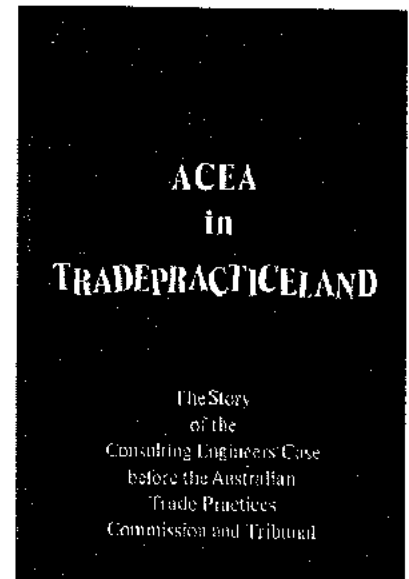


Hazel Hawke is Guest of Honour at the 1988 ACEA Engineering Excellence Awards:

(from left to right) Ken Quince, Deputy General Manager, Darling Harbour Authority; Peter Thompson, Ove Arup & Partners; Mrs Hazel Hawke; Roy T. Hardcastle, ACEA President. Photo: ACEA Archives

Chapter 4

The Trade Practices Act: Six Years of Representation and Argument



The ACEA and the New Trade Practices Act of 1974

The ACEA's Code strictly banned members from competing against each other on the basis of price. However, in mid-1974 the new Trade Practices Act became law, prohibited such a ban and caused the Association to fight hard to defend its principles.

In late 1974 the ACEA applied to the Trade Practices Commission, seeking an authorisation of its Rules, Code of Ethics, Terms of Engagement and minimum fee scales under the new Act. This was the first test case of any profession under the new Trade Practices Act. The main issue was ACEA's opposition to competition between its members on the basis of price. The banning of fee competition was the cornerstone of the Association's approach to professionalism, the maintenance of high engineering standards and the protection of the community.

The Commission rejected all of the ACEA arguments and the Association appealed to the Trade Practices Tribunal. Dr Peter Miller led the appeal in which the Association argued that fee competition reduced effective competition between firms and was not

in the public interest. Although the Tribunal overturned the Commission's findings and allowed the ACEA to issue a Guideline Scale of Fees, it did not entirely agree with the Association's views and gave its implicit blessing to fee competition between consulting engineers.

Eric Brier, ACEA President from 1980 to 1982, says that the application was rejected on the grounds that the requirement for minimum scales of fees transgressed the Act by effectively preventing fee competition between firms.

"This was a serious blow to the Association which believed that competition on the basis of merit and not fees was essential for engineering services. Unlike most other professions, which were protected by State legislation, engineers were not."

"Nevertheless, the Tribunal did specifically recognise the right of consulting engineers to promote the principle of selection upon the basis of merit. The ACEA has since maintained a campaign to educate clients and decision-makers on the benefits of proper methods of selection and jointly with the IE Aust, published a Guide on Consulting Engineering Services."

After the Dust had Settled Trade Practices Decision and Appeal

Ben Fink, ACEA President from 1978 to 1980, says that ACEA's appeal against the Trade Practice's determination to the Federal Court led to the retention by the ACEA of the right to formulate and publish terms of Engagement and Fee Scales, other advisory material and to maintain a mandatory Code of Ethics.

Matters initiated during this time, in the wake of the appeal included:

- The drafting and adoption unilaterally or by cooperation with the IE Aust and APEA of a Code of Ethics, Terms of Engagement and Fee Scales and Standard General Conditions of Contract for Construction;
- The formulation of a Council of Design Professions to provide a coordinated approach to private and public clients and Government;
- Representation to client bodies of ACEA views on professional practice, particularly to maintain a responsible approach to the selection of consultants and Terms of Engagement;
- The enhancement of the Survey of Practice Costs, both to assist members in the financial management of their practice and to provide a validation of the Recommended Fee Scales - particularly in a more competitive practice market as a result of the Trade Practice's determination;
- Greater development of Practice Note production as a means of improving Consulting Engineers practice.

The ACEA in Tradepracticeland

An account of the Trade Practice submission and appeal, which lasted six years, is recorded in the ACEA publication *ACEA in Tradepracticeland*, which was officially launched by former ACEA President Dr Peter Miller at the ACEA Annual Conference at Hobart's Wrest Point Casino in September 1981.

In a later comment on the issue, Dr Miller says, "The sorry story was encapsulated in the ACEA Publication 'ACEA in Tradepracticeland' which probably should be re-read every five years or so to keep open the possibility of attacking some aspects of the legislation which are against the public interest. It should be noted that none of the assurances of clients, particularly public sector clients, which were given in evidence at the appeal have been kept, and all of the unfortunate consequences with ACEA predicted have occurred."

The ideological dilemma created by the Trade Practices Act and the Tribunal's subsequent decision was the beginning of the debate over broadening the ACEA membership to include other people in addition to principals of consulting engineering firms.

Peter Hein, who was ACEA President from 1982 to 1984, says that the seminal issue over these years was the potential effects of the Trade Practices Act of 1974 on the professions.

"The great concern was that pressures on fee levels would lead to unbridled competition with consequent adverse effects on the standards and standing of the profession. Over the ensuing years, the ACEA has waged a continuing battle

The ACEA In Tradepracticeland (continued)

to convince both members and the client body at large that the question of competence, reputation, proper appreciation of the task, experience in the type of work involved and the availability of appropriate staff should be the first criteria in the selection of a professional advisor. Adequate fees are essential for a consulting engineer to continue to maintain a high quality of service."

The Ongoing Effects of the Trade Practices Act on the Industry

John Laurie, who assumed the Presidency of the Association in 1984, says, in his recent reflections on the effects of the Trade Practices Acts on the consulting engineering industry, that the overwhelming issue for the ACEA in this period was the devastating effect on Member's firms brought about by the Trade Practices Act requirement of fee competition in professional practice.

"Although the Trade Practices Tribunal postulated on the general proposition that selection should be on merit, and ruminated that no engineering firm would lower its fees below the level of viability, the combination of an economic slowdown and the ruthless application of tendering and fee competition by the Department of Housing and Construction brought great hardship to the consulting engineering industry in the early 80s".

'The great concern was that pressures on fee levels would lead to unbridled competition with consequent adverse effects on the standards and standing of the profession.'

Chapter 5

Increased Industry Recognition in the 1970s and 80s

A Gift to the Nation

Harold Richards, ACEA President from 1976 to 1978, recalls that, in spite of the threats of reduced work loads and the Trade Practices Commission decision, the ACEA maintained a strong sense of idealism as it approached its 1977 Silver Anniversary Jubilee year.

"David Sprigge our Director, who throughout his tenure and in particular during the lead up to the Trade Practices Act, had encouraged us to maintain the highest professional standards, suggested that we conduct a competition within our membership for a project that would be a gift to the nation".

"F. J. Brookman won the competition with a design for a recharging system for intra city electric vehicles. The Association funded the further development of the concept and upon completion, the report was presented to the Hon. Kevin Newman who accepted it on behalf of the Prime Minister and the Nation."

1977: The Silver Jubilee Year

A major event of the 1977 Silver Jubilee year was the Jubilee Conference and Annual General Meeting in Sydney. The Governor of NSW, Sir Roden Cutler VC, KCMG, KVO, CBE officially opened the Conference at the Sydney Opera House in the presence of members, friends and distinguished guests including H. C. Frijlink, President Elect of FIDIC and presidents of consulting engineering associations in New Zealand, Hong Kong and Japan.



Demonstration of the prototype power-linked parking meter in Melbourne in 1977. John Brookman checks the meter watched by ACEA President Harold Richards, right centre. Photo: ACEA Archive.

Campaigning Nationally for the Use of Australian Consulting Engineers

With the mineral boom in the mid-1970s, involving major mining and resource developments throughout Australia, private enterprise became more heavily involved in the field of major developments which, until the early 1960s, were mostly the province of government. Few of these companies had the in-house skills and capacities to initiate and develop major projects and associated infrastructure in remote areas, and consulting engineers were being engaged to handle some of the more complex undertakings.

Campaigning Nationally for the Use of Australian Consulting Engineers (continued)

The ACEA was campaigning strongly for the preferred use of Australian consulting engineers on Australian projects. An argument in support of this was made in Federal Parliament by Peter Falconer, Liberal Party member for the Victorian electorate of Casey in February 1978. Mr Falconer was basing his concerns partly on an article in the ACEA's journal *The Consulting Engineer*, which raised concerns over the lack of design work being done on major projects by Australian consulting engineers. The ACEA was also actively lobbying state and federal government Ministers on this issue.

ACEA President Harold Richards attended an important conference organised by the Western Australian Government in Perth in March 1978. The conference was held to discuss the ways in which Australian industry could participate in the North West Shelf Gas Development Project in WA, and Harold Richards expressed ACEA's view that Australian consulting engineers should play a significant role in the project. At this time, the ACEA represented 270 practices and 600 principals employing nationally about 6000 people, mainly professional engineers and technicians. Members engineered \$1,000 million of work annually.

In addressing perceptions of lack of resources and experience, the ACEA's proposition was based on the fact that Australian consulting engineers had been significantly involved in major resource projects including the natural gas pipeline from Moomba to South Australia; ports, ore loading and handling facilities in Australia's north west; drilling platforms in the Gulf of Papua; marine facilities for Western Port Bay in Victoria and power station developments in remote areas of Australia.

Into the 1980s and the Desktop Computer Age

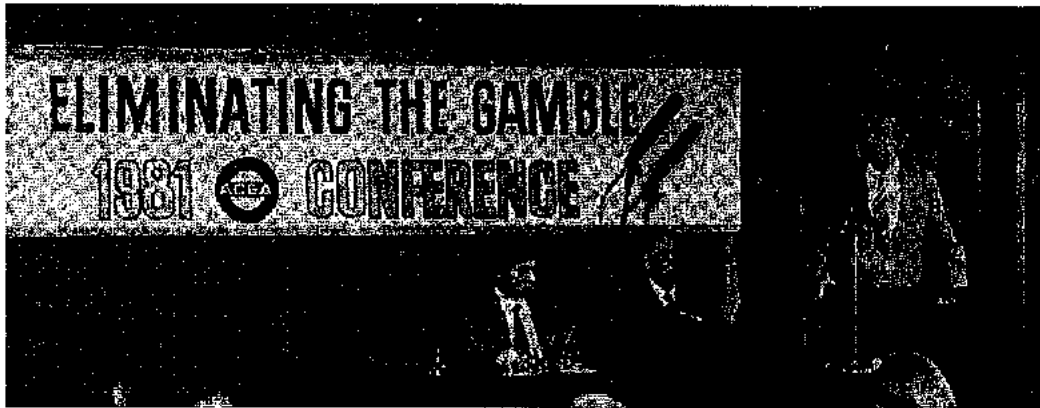
Eric Brier was elected President of ACEA in October 1980 and recalls that in addition to its responsibilities to the consulting engineering profession in Australia, the ACEA had international interests as a member of FIDIC and a close relationship with the Association of Consulting Engineers New Zealand (ACENZ).

The 1981 annual ACEA Conference at the Wrest Point Casino, Hobart, was opened by the Hon. D. A. Lowe, Premier of Tasmania. In his opening address, the Premier said that there was a need for the closest possible collaboration between all levels of government, and the private and public sectors. He said that if this did not happen, the community would not realise the enormous potential that existed in Australia.

Eric Brier says that two sessions were devoted to exploring the implications of the decisions of the Trade Practices Tribunal as they affected the ACEA's Rules and Code of Ethics.

"On the second day of the conference, three important topics were discussed: the avoidance of litigation, accountability to our clients and the effect of high technology on future practices. The age of computers was just emerging and during the years which have followed, they have completely changed the structure and management of consulting engineering," Eric says.

Reporting on the conference, the *Hobart Mercury* stated, "Mr Brier warned governments not to depend too heavily on the jump of activity in the resources area.....he said that decisions by governments had a profound effect on consulting engineers, who provided work which created employment."



Tasmanian Premier the Hon. D. A. Lowe officially opens the ACEA Federal Conference at Hobart's Wrest Point Casino in September 1981, ACEA President Eric Brier is at centre. Photo: ACEA Archive.

Into the 1980's and the Desktop Computer Age (continued)

In March 1982, Dr Peter Miller, ACEA Director David Sprigge and Eric Brier represented the ACEA at a forum organised by the NPWC and the NBCC in Canberra. Eric Brier had an opportunity to discuss the effects of the Trade Practices Act on the building industry with the Hon. Senator Durack, Federal Attorney General.

The Debate on Limited Outside Ownership of Member's Firms

John Laurie says that during the early 1980s there was considerable interest and discussion about the possibility of changing the Rules of Association to allow a degree of outside ownership of member's firms.

"The intention was to broaden the range of skills which a firm could offer by including complimentary skills and /or to provide increased financial depth for expansion and, possibly, new technologies. A survey of members confirmed keen interest on the part of some members, but the majority of the responses favoured retaining the status quo."

The move was defeated in a subsequent ballot of the ACEA membership.

Growing International Cultural Cooperation

Eric Brier recalls that at the first council meeting of 1982 he received approval for a scheme to exchange staff between Australian and Japanese consulting practices with the objective of promoting cooperation and strengthening the market for engineering services throughout the Asia Pacific region.

"The practice is still in operation and I believe has assisted engineers from both countries to enhance their understanding of each other's cultures."

FIDIC held its Conference in Singapore in June 1982, and ACEA was represented by Eric Brier. The opening address was given by the Deputy Prime Minister of Singapore, the Hon. S Rajaratnan, who spoke on the influence of Asia in the evolution of civilisation and the important role it will play in technological revolution in the twentieth century.

Member firms of the ACEA were also providing a range of consulting engineering services to overseas projects in the early 1980s and this led to the establishment of a number of reciprocal alliances with overseas firms and organisations. Following the success of a 1992 ACEA Mission to Malaysia, a seven-member ACEA Mission to Vietnam in

*Growing International Cultural Cooperation
(continued)*

May 1994 led by Dick Kell, met with several government ministries, Austrade officials and a group of private investors. The mission subsequently led to the development of a cultural and technology exchange program between the ACEA and VECAS-the Vietnam Engineering Consultants Association.

Recognition of Consultant Selection Based on Merit

John Laurie says that the period 1984-86 saw the first signs of recovery from the effects of an economic slowdown.

"The numbers of staff began to increase after three years of decline and this was followed by a gradual increase in profit margins, which had sunk to a near-terminal level of some 4 per cent."

"There appeared to be two factors at work in this improvement. Firstly, member firms began to learn that reducing fee levels is not in itself the solution to competition in the offer of engineering services. Methodology, quality of people, timelines etc, were where the emphasis needed to be, in order to deliver to a client what he was looking for. And, on the other side of the ledger, it was slowly dawning on client bodies that relentless squeezing of fee levels was producing bad engineering and bad service. In particular, the Department of Housing and Construction and the state authorities which it coordinated through the National Public Works Conference moved to a system of selection which examined the overall merit of proposals before selecting a preferred bidder for negotiation of fees. It is fair to say, I believe, that it was largely as a result of sustained pressure from the ACEA that this improvement came about."

Improving Business Management

Peter Hein held a number of ACEA official positions from 1975, becoming President in 1982 - 1984. Peter recalls that this period spanned the last weeks of the Whitlam Labor Government, the full term of the Fraser Coalition Government and the initial period of the Hawke Labor Government.

"The policies of and legislation enacted by all these administrations influenced ACEA activities in many ways and absorbed much of the energies of office bearers and staff members," Peter says.

Seminar programs in business management and related subjects were held regularly and often included speakers from overseas. In 1984 a further development was the introduction, in association with the University of Melbourne Graduate School of Management, of an annual one-week intensive course in practice management conducted by Professor Danny Samson. This course, to which many senior ACEA members have contributed, continues to this day and is mainly attended by younger principals and employees with potential.

In 1989, Structural engineer, Mrs Eva Tihanyi, became the first woman member of the ACEA since its inception in 1951.



Increasing Competition from Corporatised Government

During Roy Hardcastle's Presidency from 1988 to 1990, government engineering departments were being corporatised and pressured by governments to outsource work or compete with the private sector, which the ACEA believed was unfair competition.

In commenting on this issue, Roy says, "I always believed as did the ACEA that the public sector should retain a core group of highly competent and experienced engineers to advise government on projects under their control, to engage appropriate consultants to carry out the detailed work and to act as the client's representative during all phases of the project."

"Not surprisingly this approach by ACEA was not favoured by public sector engineers who could not see that their political masters were intent on reducing the cost of government services. If there had been more preparedness at the time to accept the inevitable, the loss to the public sector of highly experienced engineers may not have occurred to the extent it did."

"The result was open hostility towards the ACEA and its members which led to a number of problems, particularly in the area of fees, conditions of engagement and liability. Fortunately, throughout this period, regular meetings of Chief Executives of the IE Aust, APESMA and ACEA were held to try to reach common ground and, to a large extent, these were successful for all concerned."

John Miles says that in the early 1990s a critical challenge in the Federal Government arena was the continuing competition from the government-subsidised Australian Construction Service (ACS). As well as competing directly with member firms, the ACS also gave policy advice to the government, a position which was seen by the industry to be one of a conflict of interest.

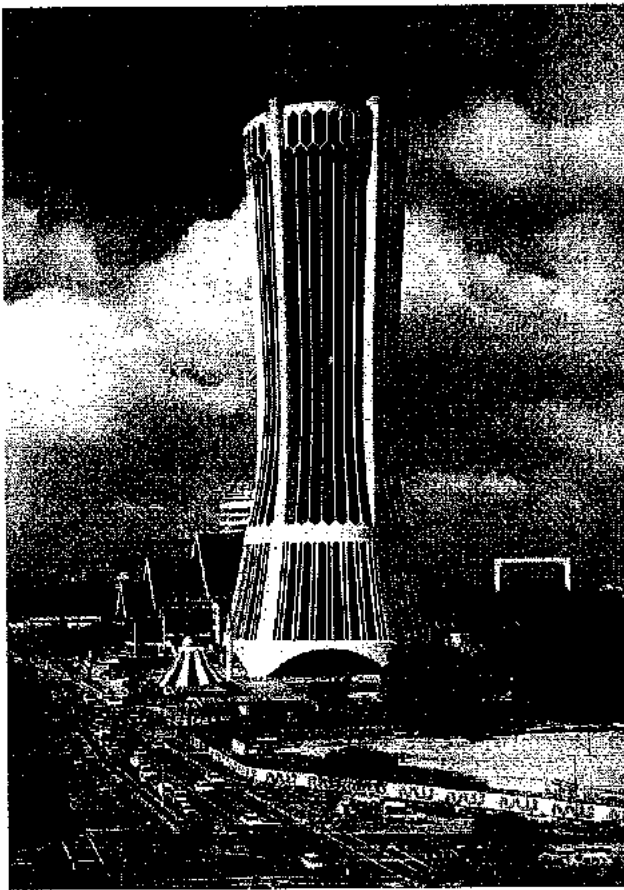
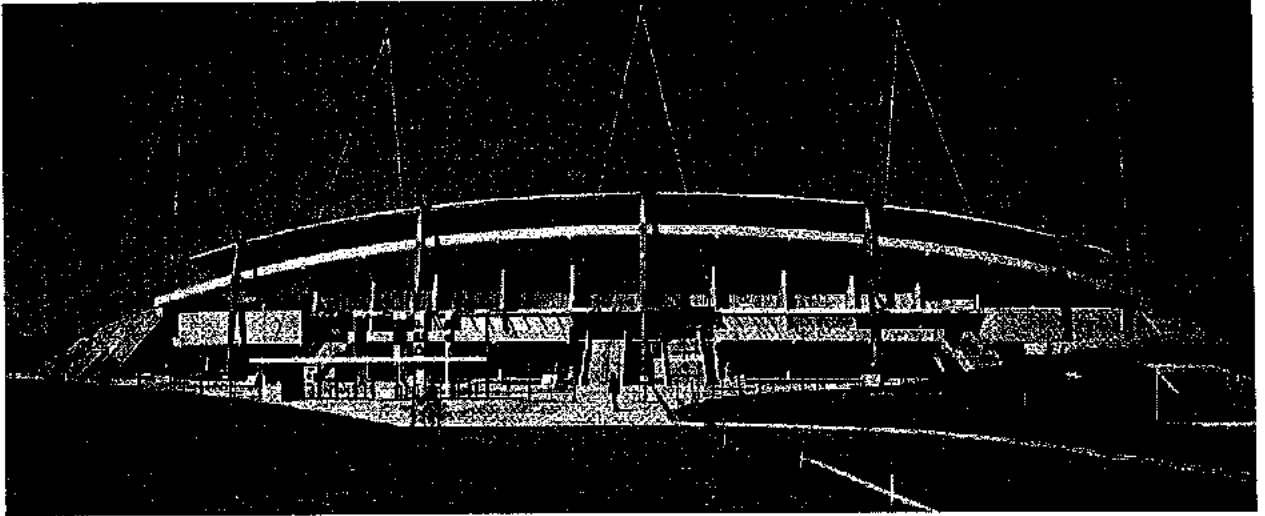
"Our position as consultants who were competing in the marketplace was that governments, by all means, should maintain the capacity to organise and manage large engineering projects. But they were not in the business of designing or constructing things and really should have outsourced more of their core engineering work."

"We kept asking the government why they were spending taxpayers' money by competing in a market which was perfectly well served by existing private sector suppliers. Eventually they listened; ACS was subsequently broken up and sold off to an ACEA member firm."

"The Snowy Mountains Engineering Corporation (SMEC) is a good illustration of how a former government-based engineering organisation has been privatised and developed into a highly respected and world class international business operation."



W.A. Premier, Sir Charles Court addresses the ACEA 1980 Federal Conference in Perth. Photo: ACEA Archives.



Award-Winning Projects of the 70s and 80s

(top) The National Athletics Stadium, Bruce ACT, won an ACEA Engineering Merit Award for consulting engineers Bond James Laroon Pty Ltd in 1978

(above) Rankine & Hill received an ACEA Engineering Merit Award in 1979 for the National Bank House Project, Bourke Street Melbourne

(right) Rankine & Hill received an ACEA Award of Merit for the Luth Headquarters Building, Kuala Lumpur in 1985

All photos: ACEA Archives

Chapter 6

Interaction with Government and the Marketplace in the 1990s



Minister for Foreign Affairs, Gareth Evans, ACEA President Dale McBean, the High Commissioner for Malaysia, Dato Zainaz Abidin Ibrahim and the Chairman of ACEM, Ghazali bin Bujanj shake hands on a Memorandum of Understanding between the ACEA and ACEM in 1992.

The ACEA's Quality Management document published in 1992

Surviving a Recession: A New Task Force Structure and Strategic Plan

Engineers, it appears, have a natural talent for forming committees. For over 40 years up to the 1990s, the ACEA had operated under a system of federal sub-committees which were managed by the individual State Branches. New committees were formed over the years as new objectives were identified, leading to the eventual establishment of a total of 12 permanent committees by 1990.

Dale McBean, who became ACEA President in October 1990, says that because individual State Branches were more interested in their local affairs, the system at that time had lost direction and needed a greater national focus on important strategic issues.

"So we adopted a new system of improving the effectiveness of the ACEA by abandoning the committees and adopting a new task force structure which, while encompassing all of the essential work of the old committees, also allowed an overall focus on important national issues including Marketing, Management and Corporate."

"Of great importance to our industry was the quarterly meetings between the ACEA, IEAust and APESMA, which ensured continued good relations with the Union and the amicable resolving of industrial disputes."

"One significant aspect of the industry at that time was the downturn in staff numbers due to a nationwide recession. Business had dropped by 12-15 per cent, making this a period of high competition between consulting engineering firms. Some businesses were undercutting fees to retain staff and many members were looking to the ACEA for answers on how they could cope with the recession. Our membership grew significantly - it tends to happen when things are tough and people join the ACEA to benefit from our services."

The Annual General Meeting of the Association on 13 October 1990 adopted a new Strategic Plan for 1990-1993. The Plan's strategic objectives included recognition of the need for increased remuneration levels, recognition by the community that the ACEA is the representative organisation of the consulting engineering profession, improvements in the image of the ACEA membership, increased market share and

*Surviving a Recession:
A New Task Force Structure and Strategic
Plan (continued)*

establishment of the principle of
'Selection on Merit.'

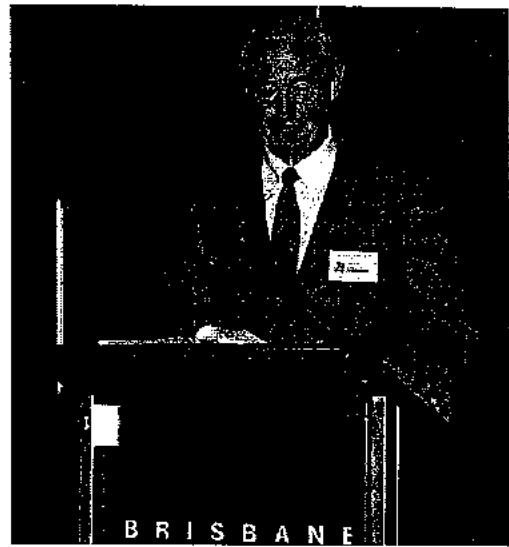
Dale McBean says, "Significantly, our theme for the ACEA's 1991 National Conference was 'Managing for Profit.' Like all professionals, consulting engineers were facing pressure on two major fronts – professional recognition and fee scales commensurate with that level of professionalism.

Training Initiatives in the Early 1990s

The ACEA was conducting its own seminars and courses long before the Federal Government made these compulsory. A particular requirement in 1991 was that Quality Management Systems had to be incorporated in bid and tender documents to successfully gain work for government organisations. In 1990, an ACEA Panel produced a 90-page document which included topics on subjects such as Quality Management, Practice Management, Management and Administration of Design for members' comments.

In his 1990 President's Report, Roy Hardcastle said "The greatest spur to survival is a viable, profitable organisation. To achieve this, ACEA firms need to recruit people with new skills, to retrain people and to keep up to date with current technology."

During Dale McBean's Presidency in the early 1990s, the Federal Government was providing money for training programs and the ACEA applied successfully for a training levy to start the Apprenticeship Training Scheme. This became known as the Longworth and MacKenzie (L & M) draughting school and is still operating today as The Training Centre under former L & M Chief Draughtsman John Pierce.



ACEA Vice President John Miles Presenting the ACEA Engineering Excellence Awards in 1991

The Launch of CIDA

During the early 1990s, the ACEA was one of the organisations from whom the Federal Government was increasingly seeking advice and participation, becoming involved in the pursuit to 'develop a more efficient, reliable and internationally competitive construction industry.'

Dale McBean recalls that in December 1991, the Federal Government launched the Construction Industry Development Agency (CIDA), amid much fanfare in Kings Hall, Canberra. Full details of the implementation arrangements were announced by the then Prime Minister, Bob Hawke, supported by Ministers Peter Cook and David Bedall.

"CIDA was established to try and completely reform the Australian construction industry. They produced a document, the *Construction Industry In-principle Reform and Development Agreement* for all parties to sign, but it laid much of the blame for problems in the construction industry on designers."

"Whilst some 19 groups had signed it, the architects, surveyors and engineers refused to sign on principle. The document was blaming us for the problems and at least we had the guts to stand up for our members."

The Launch of CIDA (continued)

John Laurie continued with ACEA's involvement on the ACBDP committee and, in November 1993, Ministers Laurie Brereton and Alan Griffiths launched the CIDA Pre-qualification Criteria for Consultants, Contractors and Sub-consultants, announcing that firms had to meet the new criteria to be considered for Federal Government consulting briefs.

'Fightback' and the Proposed GST

Dale McBean says that during this time, politicians of all persuasions were quite accessible. The ACEA enjoyed a period of close consultation with the Federal Government and was represented on its Major Projects Committee.

"At this time John Hewson was attempting to come into power in federal politics. Consulting engineers, concerned over the impact of the Coalition's proposed Goods and Services Tax (GST), were encouraged to make submissions to the special investigation committee established under Sir William Cole. We were fairly active in approaching Hewson over a number of aspects of the Liberal Party's 'Fightback' strategies. We were concerned at the possible impact of the proposed GST, so we travelled to Melbourne to try and convince Hewson on how the consulting engineering industry could best be treated."

The ACEA's Increased Profile and Recognition

John Miles assumed the Presidency of the ACEA in October 1992 during the ACEA's National Conference in Canberra.

John says, "Although these were difficult years for consulting engineers, they were certainly not as difficult as 1991 and 1992

which had seen significant hardship for member firms as a result of the recession. As early as 1992, the Federal Government increased infrastructure spending and by 1993 and 1994 its effect was starting to be seen. By the end of 1994 I believe that ACEA had in place an excellent infrastructure for furthering its members' interests, and the lobbying activities of Will Faithfull and the ACEA's Canberra Office played a key role in this."

"My first major organisational challenge was to preside over the transition of the ACEA's Director, David Sprigge (who had been in office ever since the ACEA set up its own separate secretariat), to an appropriate successor. Since David had been the face of the ACEA for some 20 years, this was truly the end of an era."

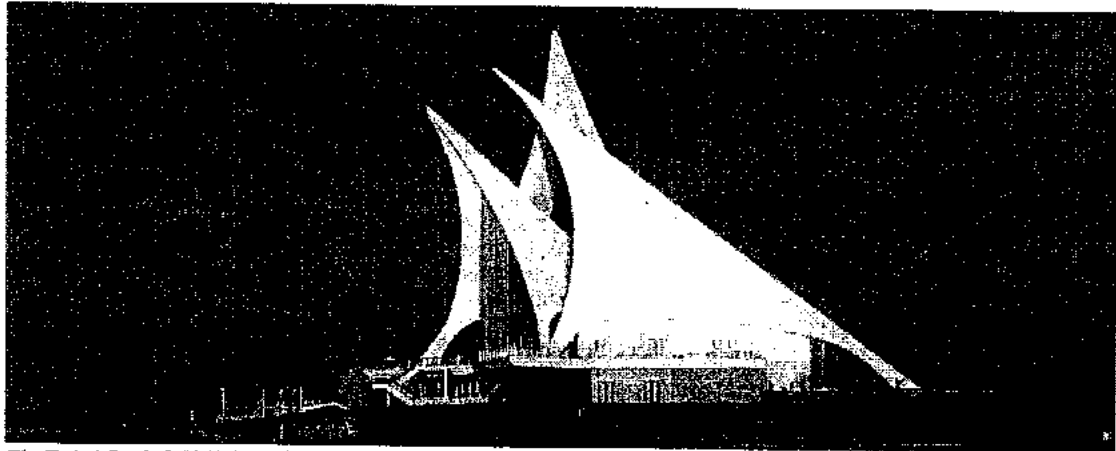
Changing the Emphasis by Redefining and Re-Engineering

John Miles says, "In 1993, the time had come to change the emphasis from being a thoroughly competent and well-respected association of professionals in business, to being a higher profile, more outwardly-looking industry association, with more to say, increased interaction with government and more recognition from industry."

"In seeking a new Director or Chief Executive Officer, as we decided to describe the position, we were looking for someone with marketing skills and the ability to act as an agent for change."

"To reflect more contemporary usage, the National Office was restyled as the Corporate Office, Chapters became Divisions and the ACEA was incorporated.

Premises were updated and changes were made in the areas of staffing, office systems, publications, public relations and promotions."



The Dubai Creek Golf Club, engineered by Bonacci Winward for the Government of Dubai, was Highly Commended in the 1993 ACEA Awards for Excellence. Photo: ACEA Archives.

*Changing the Emphasis by Redefining and Re-Engineering
(continued)*

"I believe by the end of 1994 the ACEA had transformed itself from the 'clubby' kind of organisation where its roots lay, to a more contemporary corporate kind of organisation with a greatly increased awareness in the government and business communities."

Increased Interaction with Government and Industry

John Miles says that a significant activity was the very deliberate ramping up of the ACEA's interaction with government and industry.

"The Federal Government had not long beforehand established the Construction Industry Development Association, which required our significant participation, if only to be sure we didn't get pushed around. We also put our weight behind the Australian Council of Building Design Professions (BDP) and, during my first year in office, I took over the chairmanship of that Council which represented over 70,000 members at the creative end of the construction industry."

"To lead this initiative, involving as it did cooperation with the Institution of Engineers, Australia, the Royal Australian Institute of Architects and other allied professions, was, I believe, very worthwhile at this time."

Qualification Based Consultant Selection

The ACEA has always believed that competition on the basis of merit and not fees is essential for engineering services and this position was reinforced when the Association unsuccessfully appealed against the Trade Practices Act decision of 1974. Subsequent pressure from the ACEA through representation and community education campaigns was successful in promoting the criteria of merit as a significant basis for selection.

John Miles recalls that Value Selection was a major activity during his Presidency from 1992 to 1994.

"This was the time when we supported Value Selection of consultants which, although including price as a criterion, emphasised the need to keep price in its place. This was and still is, I believe, reasonably effective in overcoming the perception from the public sector that all engineers are the same and that selection should be on the basis of lowest price. Nevertheless, it was not our preferred method of consultant selection and in the second year of office I was involved in the initiation of a very strong campaign to promote Qualification Based Selection (QBS). I am happy to note that in some quarters this has gained a respectable place."

Ongoing efforts by the ACEA to have QBS adopted as part of the consultant selection process gained the support of kindred organisations such as the Australian

*Qualification-Based Consultant Selection
(continued)*

Council of Building Design Professions and favourable responses from many state and federal government departments in Australia.

In 1996, the Federal Government endorsed QBS, with the Department of Administrative Services issuing guidelines which described it as the selection process which 'promoted intelligent design.' This action followed a Melbourne Quality System certification service's confirmation that QBS met Australian and international standards requirements.

In what was regarded by the ACEA as a small but significant step in 1998, the New South Wales Department of Public Works and Services adopted a 'two envelope' system for procuring design services on projects of more than \$150,000 in value. Although this system retained price competition as a part of the assessment process, it also sought proposals that were 'innovative, demonstrated technical excellence and delivered a high quality service.' The system was designed to eliminate perceptions that the government was motivated only by price when seeking design services.

Membership Qualifications Changed

In 1993 there was a focus on activities associated with increasing the Association's membership. Many firms had been questioning the value of membership of the ACEA and much effort was devoted to promoting the value provided by ACEA membership to existing and potential members. Total ACEA membership in July 1993 stood at 862 members and 20 overseas members. In addition, there were 9 life members, 2 honorary members, 83 retired members and 25 associates. The size of member firms ranged from sole practitioners to the largest firm employing more than

1000 people, the predominant firm size being 6 to 20 people.

John Miles recalls that membership qualifications were amended to enable membership of the ACEA by private sector companies which were 'controlled' by engineers, as opposed to the previous 'ownership by engineers' requirements.

"Whilst this was important, it did not lead to any significant upsurge in interest and history probably shows that the change might, with advantage, have been made earlier. Nevertheless, we did achieve some success. Every additional member was important, as it was a time during which some firms decided to part company with the ACEA."

Input to Government Inquiries and Decisions

Richard (Dick) Kell AM is Chairman of Cardno MBK and was ACEA President from October 1994 to 1996. Dick says that the ACEA had some significant influence on industry and government during this time.

"We had good relations with the then Federal Labor Government and this gave us opportunities to provide significant input to government inquiries into the export of services, purchasing policies, innovation and the Standards industry."

"We involved ourselves with government, got a 'place at the table' and contributed significantly to government initiatives such as the Government Innovation Policy, AusAid and Austrade.

"In earlier times, the government was seen as an educated client. Governments globally have been downsizing and eliminating engineering departments and this was the trend when I was ACEA President. The political policy was then to downsize and put in non-engineers as managers and this has created a lack of adequate capability for engineering within government."



Following an agreement between the governments of Australia, Laos and Thailand, Australian consultants Maunsell Pty Ltd and Sinclair Knight and Partners Pty Ltd were commissioned in 1991 to design the Friendship Bridge spanning the Mekong River.

The Global Marketplace of the 1990s

In 1991, two of Australia's major engineering and project management groups, Crooks Michell Peacock Stewart, and Scott & Purphy merged to form CMPS&F, the largest Australian engineering consultancy in south east Asia. One of the firm's major projects at that time was the engineering, procurement, construction and management of the Kutubu Oil development in Papua New Guinea.

The extent to which Australian firms were involved in overseas work in 1994 - 95 was shown by the fact that the Export Finance and Insurance Corporation (EFIC) provided \$6.2 billion in bonds, finance and credit insurance to Australian firms working in other countries.

From a member survey in conducted in 1994, it was clear that firms with significant export activities were, overall, performing better than those firms which were totally dependent on the home market. In response, the ACEA formed the ACEA Export Group in November 1994 with David Singleton of Arup as Chairman. The Group's task was to stimulate export activity, provide a strong and effective lobby group for ACEA members and identify national and international associations with whom it could actively promote its members' services.

In terms of the consulting engineering profession, ACEA members by 1996 were earning over \$270 million in fees from

projects in more than 24 countries. They were engaged in various projects at Hong Kong's new airport; working on grain terminals, environmental studies and coal-gas projects in China; developing new ports, city centres, water reticulation and drainage schemes, factories and oil refineries in Indonesia; providing health studies in the Philippines, Vietnam and Cambodia; and working on mining developments in the Commonwealth of Independent Soviet States, Africa and South America.

In 1997 more than a quarter of ACEA members reported that they were doing business outside Australia, mostly in Asia and the South Pacific island nation states. One of the world's largest construction projects was the Chek Lap Kok Airport at Hong Kong, where ACEA members or their associates were involved with a broad range of services. These services included project management of the airport terminal, and engineering services for the Tsing Ma and Tung Chung bridges, airport infrastructure and fire safety.

Maunsell, Connell Wagner, Arup, Meinhardt, Hyder Consulting and Scott Wilson Irwin Johnson were by then established participants in projects in Hong Kong and China, some with involvement dating back to 1981. Other major projects undertaken in China during the 1990s included water and waste water treatment plants and water supply systems, with some projects being funded by the Australian Government's AusAID scheme and the World Bank.

*The Global Marketplace of the 1990s
(continued)*

In other corners of the world, the ACEA's Engineering Excellence Awards in 1997 featured a Highly Commended Award for a container terminal re-development in Buenos Aires, Argentina, handled by ACEA member firm Cullen Grummit and Roe (International) Pty Ltd. In 1998 Tasmanian Premier Mr Tony Rundle applauded the involvement of Hobart-based SEMF Holdings in a trade delegation to China. The Company had previously undertaken significant projects for resource sector clients in South America and the former Soviet Union.

According to Australia's Trade Minister, Senator Bob McMullan, preparing for a global marketplace was the greatest challenge facing Australian consulting engineers in the 90s.

"APEC is going to open opportunities for Australian professionals in the Asia Pacific region and the General Agreement on Trade and Services (GATS) will open England and Europe. It will do no good to sit at home and cower; all change generates opportunity and Australian firms have the opportunity to be mesmerised or be fascinated."

"Those who are fascinated will embrace the prospect and prepare for change on their terms..... There is no prospect that in 10 or 15 years we will be able to maintain effective boundaries against the international provision of services."

**Global Issues Affecting
Australian Consultants in the
1990s**

Dick Kell says that during the mid-1990s, the major global issues common to the Australian industry were the image of engineering and consultant selection on price, increasing litigation with its impact

on public liability insurance and the decreasing quality of construction.

"In addressing the issue of low fees, the ACEA had introduced Qualification Based Selection (QBS) during John Miles' Presidency. We had a very effective Chief Executive Officer in the person of Geoff Crittenden. He was an action man and of great value to the ACEA in promoting policies such as QBS and Risk Management. The ACEA led the world in using qualifications and quality as the primary selection criteria for consulting engineers."

**Increasing Litigation and the
Engineering Profession**

Litigation remains an important issue on the ACEA's agenda. In a strategy designed at the time to limit the magnitude of financial risk to member firms, the ACEA officially set up the Professional Engineers Scheme (PES) with IEAust in NSW in 1996. However, after five years of operation, a decision was made to withdraw from PES in 2000 because of limited interest by member firms and restrictions on the operations and effectiveness of the scheme.

Dick Kell says that litigation has become a major issue in recent years as Australia follows the American trends of legal fees being contingent on success, and litigious community attitudes. "There is a big increase in risks carried by consulting engineers, but by implementing formal quality and risk management systems I believe that engineering firms can minimise the litigation issue."

"Litigation discourages innovation and risk. Most of the impressive and innovative developments over the years have all involved a component of risk, but the threat of litigation makes innovative projects difficult and I am disappointed that we seem to be following the trend in the USA."



Consultant to the World: One of the ACEA's best known supporters and members, John Rankine against a skyline of buildings in 1998, some of which, including the AMP Towers at Circular Quay, Sydney, he designed.

Large Firms Group

The ACEA's representation and relevance to large, medium and small firms has not been without its difficulties. Issues affecting large firms have differed substantially from those relating to small firms, and the issue of membership policy and representation has emerged from time to time as the ACEA has attempted to satisfy the broader needs of all of its members.

The ACEA's Large Firms Group was initially formed in response to pressure from representative firms' Chief Executive Officers. They saw the need for the ACEA to provide a greater business focus and relevance to the needs of larger firms whose fees provided the bulk of ACEA subscriptions at that time.

During Dick Kell's Presidency, the ACEA re-instigated the Large Firms Group which formed a relationship with major construction organisations. Dick says that over several years, the ACEA and the ACA formed an informal working group to discuss issues such as fees for design bidding, insurance and risk management as they related to the particular circumstances of large firms.

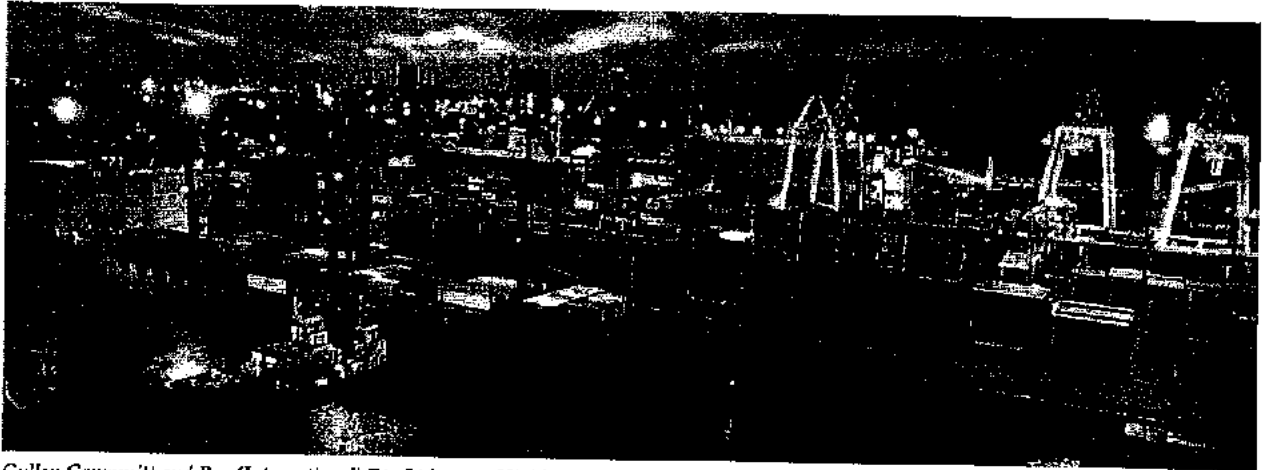
Small Firms Group

The 1995 Board meeting of the Association directed that a national Small Firms Group be formed, and *Corporate News* for December 1995 briefly advised of the development of a NSW Task Force on Small Firms. At this time, there were 447 member firms of the ACEA of which 213 were in the one to five person size. This effectively meant that 25 per cent of the ACEA membership operated small firms.

Although a number of factors, including ACEA subscription rates, were seen to disadvantage the small firms, ACEA services, notably in the areas of the *Guide to Consulting Services* and updates to the *Conditions of Engagement* were seen as major benefits by some. The NSW Small Firms Group Meeting on 29 November 1995 identified needs including contact and networking, marketing to all clients, the market strengths of small firms and information of specific relevance to small firms as issues of concern.

Chapter 7

Restructuring for Globalisation and a New Millennium



Cullen, Grummitt and Roe (International) Pty Ltd won a Highly Commended Award in 1997 for the Container Terminal Re-development, Port of Buenos Aires, Argentina. Photo: ACEA Archives.

Corporate Restructuring for a Changing World: Meeting the Needs of Globalisation

Grahame Campbell is a former Chief Executive of CMPS & F Pty Ltd, Chairman of Statewide Roads and served as the ACEA President from 1996 to 1998. Grahame says that major globalisation and other changes were taking place in the consulting engineering industry overseas when he first joined the ACEA.

"Major globalisation and change was going on all around us and in order to meet the impending new challenges I saw a need and opportunities to improve our communications and increase awareness and understanding of the ACEA's purpose and activities."

"Almost since its inception, the ACEA has attempted to satisfy the diverse and often conflicting needs of its broad membership of large, medium and small firms. The 'Top five' ACEA member firms employ approximately 5000 people or 75 to 80 per cent of all staff. Some 30 years ago, large firms were not as large as they are now. By comparison, 80 per cent of ACEA members were small firms and this contributed to a large imbalance in representation."

"My background in resource development, specialising in oil and gas pipelines, differed from that of the ACEA's heavy traditional focus on structural engineering and the building industry. I saw this as an opportunity to help the Association to prepare for and address the globalisation issues by introducing change and diversity and to attract increasing membership from other engineering areas and disciplines."

"The changes that we needed to make also impacted on our staff and organisational structure. There was a need to reduce staff in our corporate office and provide those who were left with a greater sense of direction and purpose."

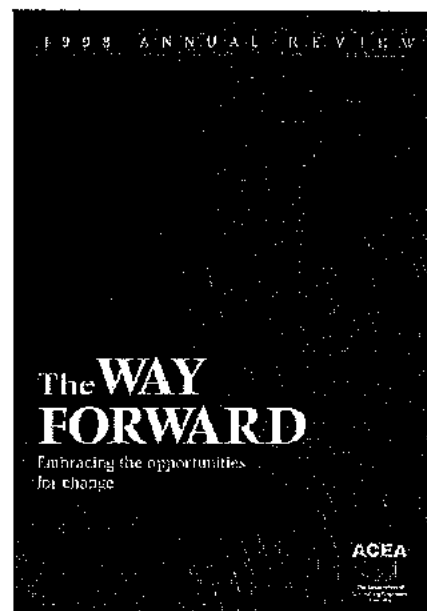
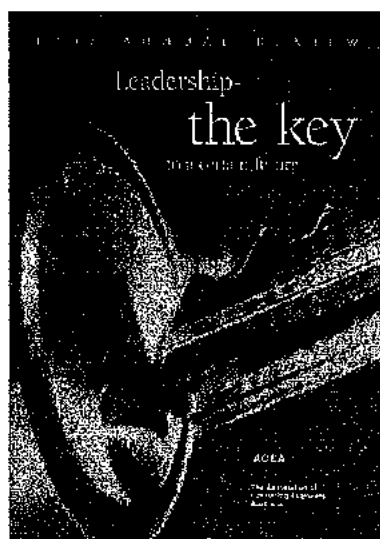
"Like any major organisational change there is no gain without sacrifice and tensions and divisions within the ACEA surfaced as members initially challenged the new directions and strategies. But our structured programs and strategies increased the awareness and acceptance of the fact that the organisation needed to radically change its culture and structure to survive and to serve the best interests of its members in a changing global market."

*Corporate Restructuring for a Changing World:
Meeting the Needs of Globalisation
(continued)*

"Changes in the industry have seen the larger firms increase in size and diversity, and many of the medium-sized firms amalgamate. The remaining small firms or sole practitioners have tended to become highly specialised or seek niche markets for their services."

"Some traditional consulting engineering firms and ACEA members, comfortable with the old order, have not been prepared to change and diversify. Some companies have had difficulty adapting to the new order and the need to compete in a largely non-engineering commercial environment."

"The ACEA has, on the other hand, positioned itself to maintain its relevance and ability to add value to diverse consultancy businesses operating in a global environment."

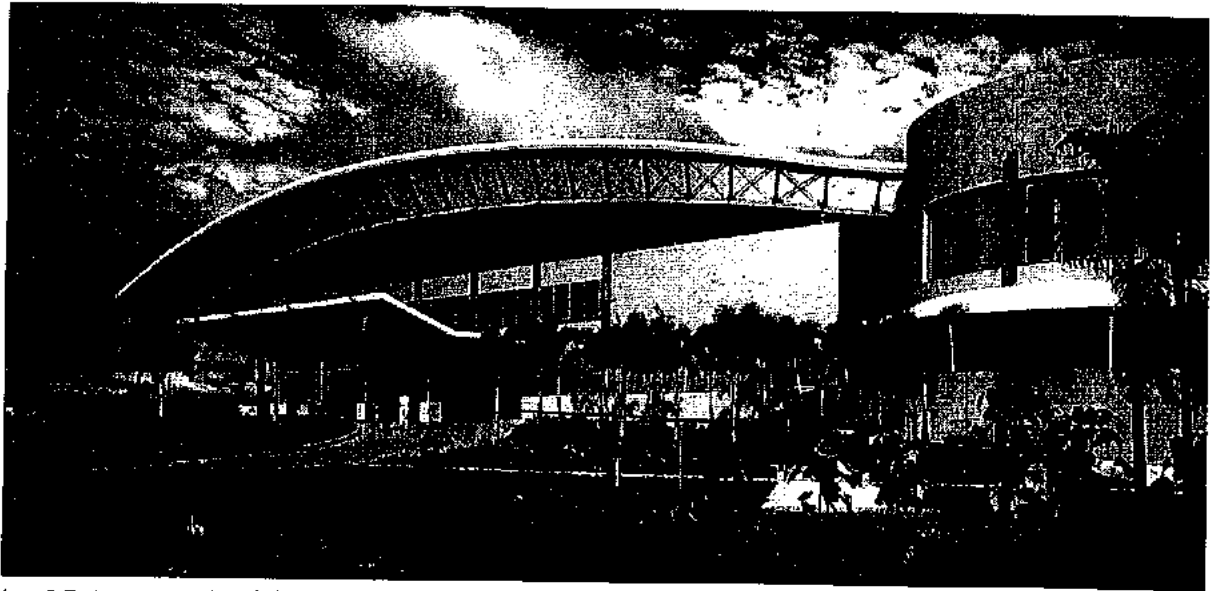


The Way Forward

In his President's Report for 1998, Grahame Campbell said that the structure of the engineering sector was changing with moves to greater integration of project delivery and new models of public sector delivery.

"FIDIC had reviewed the definition of its membership base to 'firms providing technology-based intellectual consulting services for the built and natural environment', reflecting the broadening of activities which were occurring within the consulting engineering industry internationally. It was considered inevitable that the industry in Australia, including the ACEA, would be faced with the challenges of finding effective ways to accommodate these changes."

"With the support of its reorganised corporate staff, including new General Manager, Therese Charles, the ACEA developed a strategy extending over several years to the year 2000, during which an extensive reorganisation of its operations and services would occur.



Arup & Partners won an Award of Merit for the Cairns Convention Centre Project in the 1997 ACEA Awards for Excellence. Photo: ACEA Archives

Way Forward (continued)

elements of the new plan were outlined in a program known as 'The Way Forward', in which major new actions identified were the need for meaningful differentiation between members and non-members, a high level service delivery to members and clear paths forward for both National and divisional levels of the organisation."

major new development which was initiated as part of the strategy was 'Engineer Search,' in which the needs of clients were matched to the services of consulting engineers through a computer-based skills and services central database. The levels of service to members were also upgraded through publication of additional Practice Notes, and differentiated services were developed to focus on the needs of young members and medium and large firms.

a change program – which was fundamental to the future of the ACEA – was the work of a subset of the Board, led by Ray Young.

Major Organisational and Cultural Changes: Broadening Membership Criteria

Ray Young was appointed as National President in December 1998 and continued with the major changes in relation to the ACEA's constitution, structure and approach as initiated in 'The Way Forward' program.

Ray says that membership, which was traditionally restricted to owners or part-owners of consulting engineering firms, excluded the involvement of other engineers, technical officers and specialists employed by firms. The ACEA Board, in 1998, decided to amend the membership criteria to cover membership by companies or organisations, rather than by individual members. It also served to emphasise more clearly the nature of the organisation as a business association of firms, rather than a professional grouping of individual partners. This reflected the changes in structure to engineering firms, away from

Major Organisational and Cultural Changes: Broadening Membership Criteria (continued)

the more traditional partnership arrangements to corporate entity status. These changes provided the ACEA with an opportunity to broaden the membership base by introducing younger engineers, female engineers and technicians into the Association.

"It was also considered that limiting membership to consulting engineers was stifling the Association's growth, given the diversification and global approach by firms in the year 2000 and beyond. Allied firms such as project managers and design divisions of larger non-engineering companies now had the opportunity to join the ACEA and increase its networking and lobbying influences."

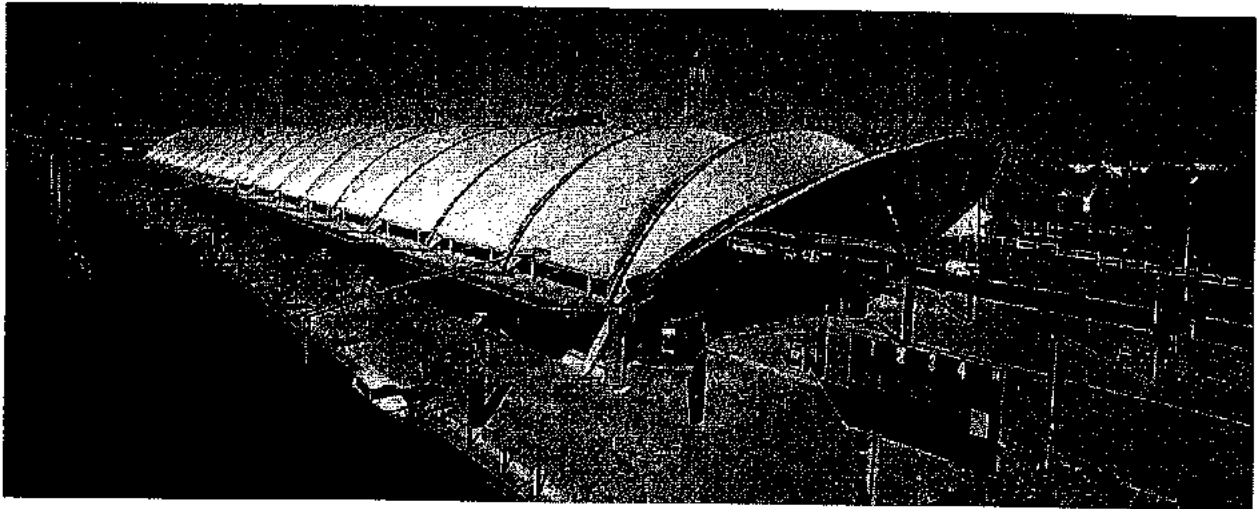
ACEA income is largely based in membership subscriptions, the size of which had, in the past, been based on the relative size of member firms. This meant that the ACEA was largely supported by the five largest firms who were contributing 85 per cent of fee revenue. In 1999 the Board decided to implement a more equitable scheme of subscription payment which resulted in a reduction in fees for the larger firms and increases for the medium and smaller firms.

Ray Young says that it was considered that with such major change to the constitution and subscription levels there was the risk of a considerable drop off in membership without widespread support.

"It was therefore somewhat pleasing at the conclusion of the constitutional changes that member attrition was minimal and far below expectations."



*ACEA Life Member Will Faithful (left), ACT Division Chair Stephen Pinter, National President Grahame Campbell, Laurie Banks and ACT Chief Minister Kate Carnell discuss opportunities for ACEA members to become involved in government business in 1997.
Photo: ACEA Archive.*



Tierney & Partners received an Award of Merit for The Olympic Park Railway Station Project at Sydney's Homebush Bay in 1998

Board Changes and the Strategic Plan

Ray Young says that when he started his term as national President in 1998, the ACEA Board comprised around 25 people including divisional chairs and proportional representations of states.

"This was a very cumbersome number to handle and at times was not as effective as it could have been. The recommendation was that the new Board be reduced to eight, including one director from each state, and two other Board members, who were not necessarily from engineering backgrounds, to add some balance to the Board and better representation generally."

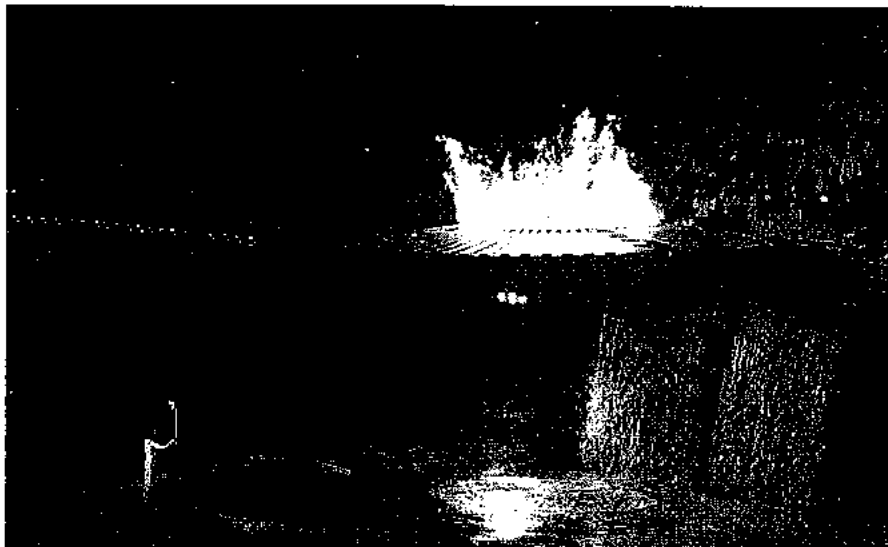
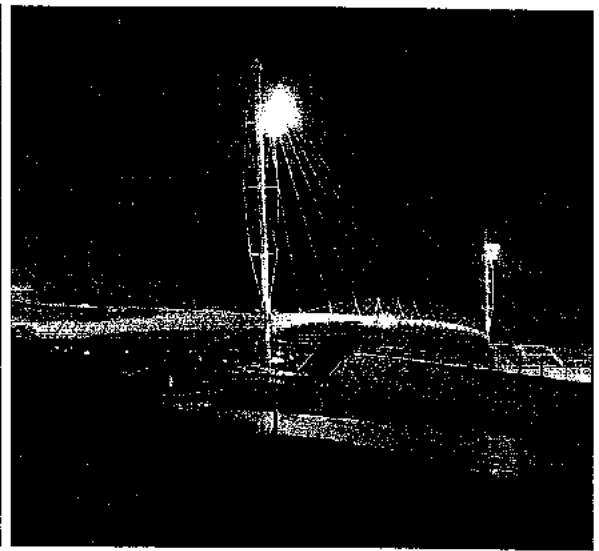
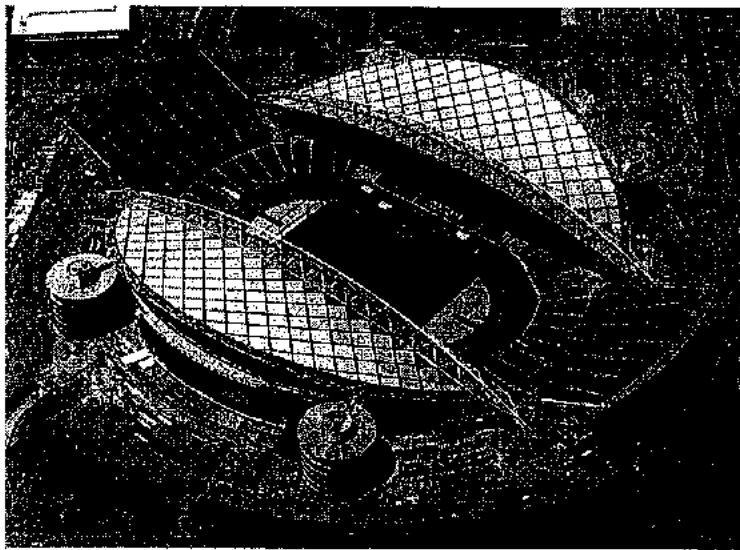
"Following acceptance of these recommendations in September 1999, the Association moved forward, while at the same time, the head office in Sydney became more streamlined and efficient, working as they were with less than half the numbers that were employed in the mid 1990s."

Consulting Services for the Sydney 2000 Olympics

The world's greatest sporting event, the Sydney 2000 Olympic Games became a showcase of Australian technical skill, with ACEA member firms being the predominant engineering designers for the event and facilities.

Connell Wagner Pty Ltd received Highly Commended recognition for their designs of the Sydney International Aquatic Centre and Sydney International Athletic Centre in the 1995 ACEA Awards for Excellence. Arup received the ACEA's 1998 Award of Special Merit for their provision of multi-disciplinary engineering services for the development of the RAS Exhibition Halls for the Olympic Co-ordination Authority. The Structural Award of Merit for 1998 was awarded to Tierney & Partners for their innovative and elegant engineering solutions for the design of the Olympic Park Railway Station. The building's architects also won the Sulman Award for Outstanding Architecture.

Consulting Services for the Sydney 2000 Olympics (continued)



Sydney 2000 Olympic Games Projects with which ACEA members firms were associated include:
 top left: Stadium Australia (Sinclair Knight Merz Pty Ltd)
 top right: The Sydney International Aquatic Centre (Connell Wagner Pty Ltd)
 above: The Northern Water Feature, Homebush Bay (Willing & Partners (NSW) Pty Ltd)
 left: The Olympic Flame Lighting Event (Tierney & Partners Pty Ltd)

ACEA's Gold Award of Merit in the Structural Category for 2000 was won by the Stadium Australia project engineered by Sinclair Knight Merz, whilst the Environmental Award in the same year went to the Northern Water Feature at Homebush Bay, submitted by Willing & Partners (NSW). The \$400 million Homebush Bay Infrastructure Development project was designed to provide essential transport and public domain infrastructure at Homebush Bay and included construction activities undertaken on remediated land. Project Managers Gutteridge Haskins and Davey received a Highly Commended Silver Award for this entry in the 2000 ACEA Awards for Excellence.

Olympic Games-related projects with which ACEA member firms were associated also included the Dunc Gray Olympic Velodrome at Bass Hill, the Sydney Superdome and P1 Car Park at Homebush Bay, and the Sydney International Aquatic Centre Olympic Expansion at Homebush Bay. Other innovative and specialist services were also provided for the site remediation and the clean up of toxic waste, Sydney Superdome, the lighting for public street areas at the Olympic site, the Olympic Opening Ceremony aerial effects and the Olympic Flame Lighting Event.

Chapter 8

The ACEA in 2001

Trends in Consulting Engineering in 2001

In his address to delegates at the ACEA-ACENZ Joint Regional Conference in 1997, Mr Bill Lewis, the World President of FIDIC said that only consulting engineers could solve most of the problems of the twenty first century, " but they will have to work smarter, not harder, if they are going to succeed."

Communication technologies in the twenty first century, including the internet and e-commerce have developed to effectively created global communities and an environment in which it is possible to communicate and manage the financial aspects of projects from anywhere in the world. The resulting major changes in the industry have been reflected in changes to individual firms. Despite the enviable and successful record of Australian consulting engineering firms who represent diverse disciplines in engineering, they continue to face increasing competition from global giants for 'mega projects' both in their own backyards and overseas.

Today's client, the ultimate owner of the project, is often a distant party such as a funds manager or investor whose focus or concern may not extend beyond the final return on investment. To succeed in this environment, the consulting engineer may need to be more than just a good consulting engineer and apply a broader range of skills and services.

Roger Olds, a Director of Coffey International, a member firm of the ACEA says that from its beginnings in 1959 as a geotechnical consulting engineering practice, the Company has grown both nationally and internationally. In 1997 the Company established a 20-year vision to become an international specialist consulting company growing into Asia, America, Europe and Africa with a growth in annual turnover from \$30 million to \$500 million. Since then it has acquired four companies and invested heavily in people, systems, business development and diversification. Specialist businesses in surface water engineering, international project management, management consulting and design and construct water treatment have been purchased.

Roger Olds says that Coffey International now has businesses aimed at infrastructure development for communities ranging from third world nations such as Papua New Guinea and East Timor to modern cities such as Hong Kong and Singapore. The combination of project management, community awareness and technical specialists is proving to be attractive to international aid funding. Through its alliances with firms in the USA, Coffey International is pursuing activities in South America and Asia.

Other current ACEA members have broadened their market potential by forming partnerships, alliances or joint

Trends in Consulting Engineering in 2001 (continued)

ventures with organisations having complementary skills and experience. In 1998, CMPS&F (now Egis) formed a joint venture to act as design engineers on Melbourne's \$1.7 billion CityLink project, whilst in the same year, following 18 months of negotiations, Groupe Scetauroute purchased CMPS&F (Egis) and appointed it as the Asia Pacific headquarters for a global organisation that employs more than 5000 staff in 100 countries.

Operating an International Services Business from Australia

The Australian practice of Arup, independent since 1970, merged with the UK – based firm, Ove Arup Partnership on 1 October 2001 to form Arup Group Ltd. Arup Group employs some 6,250 staff and is now the largest privately owned, pure engineering design firm in the world.

In his Paper for the Committee for Economic Development in Australia, titled 'Operating an International Services Business from Australia – the Challenges for Growth', presented in Melbourne in April 2001, David Singleton, Chief Executive of Arup Australasia says that services are now major contributors to the Australian economy.

"In 1998, 80 per cent of Gross Domestic Product (GDP) was generated by the services sector, and Business and Professional Services made up a significant component of the sector (13.8 per cent of services sector firms, 1998)."

"Technical services, that is Architectural, Consulting Engineering and Quantity Surveying services in the main, comprised 26.4 per cent of all firms in Business and Professional Services in 1998 and

experienced significant growth in numbers from 1994 to 1998 (52.8 per cent).

Consulting engineering firms comprised almost 50 per cent of these Technical Services firms and displayed the highest growth rate over the period 1994-98 (90.9 per cent)."

"Consulting engineering firm Arup Australasia employs in excess of 550 staff in Australia, New Zealand and Papua New Guinea and is one of the eight largest consulting engineering firms in Australia."

"In June 2000, the total number of consulting engineering firms was estimated at 7200, of which 6986 had less than 20 employees. The larger firms dominated export activity, in some cases earning more than half of their annual income from offshore activities."

"Export activities are a strategically important component of these businesses and are therefore significant to Australia's service sector."

"Australian technical services firms have made a significant contribution to the development of Asian region economies and physical infrastructure over the past twenty years. The region has been a net importer of capital and skills over this period and the participation of Australian firms has benefited both those firms and Asian technical firms, their staff and tertiary students alike. Australia's domestic construction industry, which must be internationally competitive at home, has been strengthened by this involvement in the international market place."

"There are challenges to growth in the export of technical services and these are best described as challenges to the maintenance of the status quo. Downturns in the economies in the Asian region can be expected to cause a slowdown in demand for services. Technical services firms in

Operating an International Services Business from Australia (continued)

Asia have developed capabilities to deliver all but the most complex of projects; they have become potential competitors rather than partners. Future exports from Australia must be built around 'adding value' through management and delivery of our knowledge base."

"Nevertheless, there exist strong opportunities to maintain and in time, grow the export market. Its importance to Australia is undiminished."

For many ACEA members the great frontier of the new millennium will be to compete with the world's best in the global marketplace for consulting services against competitors offering the resources, skills and the balance sheet to undertake large and rewarding projects. The ACEA's new corporate structure and service delivery in 2001 is directed towards helping its members to succeed in an increasingly global and self-regulated environment, whilst upholding the ethics and high standards of business conduct for which it has been recognised since its inception.

The Australian Consulting Engineering Industry in Retrospect

Jack Wynhoven recently retired as Chairman of Connell Wagner, one of Australia's leading international consulting firms and a long-standing member firm of the ACEA. In reflecting on the consulting engineering industry over the last 50 years, Jack Says, "Throughout most of the past 50 years, the bulk of Australia's infrastructure was owned and engineered by government. This covered most of the major community services such as roads, railways, water and sewerage, electricity, telephone and gas. This situation was based on our colonial



'For many ACEA members the great frontier of the new millennium will be to compete with the world's best in the global marketplace'

past and effectively remained unchanged until the late 1980s and early 1990s. Some 80 per cent of engineers were employed by government and this is where most graduate engineers remained to develop their careers."

"However, in the building industry, private investment in office buildings and retail centres gave privately owned consulting engineering businesses their early opportunities and established a more significant secondary consulting engineering industry. This industry provided engineering services to architects and developers and imported new technology and innovation from Europe and the USA."

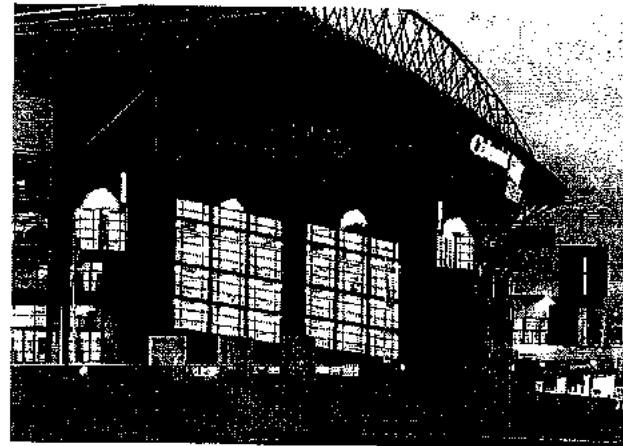
"Because most infrastructure work remained in the hands of government engineering departments prior to the late 1980s, the initial export of Australian consulting engineering services was focused on the building industry. Australian consultants had a significant influence in the establishment of consulting engineering offices for building engineering in Singapore, Kuala Lumpur and Hong Kong and many of these exist today. Names such as Maunsell, Connell Wagner, Meinhardt and Arup now have a significant presence in Asia as a result of export activities which began in the 1970s."

The Australian Consulting Engineering Industry in Retrospect (continued)

"An initial lack of creditable experience in infrastructure work in Australia greatly restricted and delayed the export of infrastructure engineering services. This changed dramatically in the 1990s as privatisation and outsourcing eventually placed many of the government engineering groups and skills in the hands of private industry. It was this opportunity for Australian consultants to become involved in major infrastructure projects in Australia that gave them the resources, work load and confidence to pursue major infrastructure projects abroad."

"Until the early 1980s, Australian consulting engineers either lacked or were perceived to lack the resources, track record and management skills to deliver major projects. It was the realisation and acceptance of the fact that Australian consultants needed to get bigger, have access to world class resources and have a greater management and financial base that directly led to mergers amongst the major Australian firms. Connell Group, Macdonald Wagner and Rankine and Hill merged to form Connell Wagner on 1 July 1989. This was followed by CMPS and Scott and Furphy, then Sinclair Knight and Merz, among others, resulting in a more substantial and robust industry. In each case, the drivers were the need for greater geographic spread, greater and more diverse project skills, greater resources and management strength."

"In parallel with this industry transformation, large international firms entered the Australian market and merged



The Colonial Stadium Project, Melbourne, an entry by Connell Mott MacDonald Pty Ltd in the 2001 ACEA Awards for Excellence

and/or acquired firms such as Hardcastle and Richards, Irwin Johnston, PPK, Kinhill, CMPS and F and, more recently, Maunsell McIntyre."

"This was to dramatically change the market place for consulting engineers and for the ACEA. The industry was no longer a group of professional consultants in pursuit of their profession more as a life style than a serious commercial business."

"It was the pressure from the larger firms that influenced the ACEA to become an association of consulting businesses providing a forum for globally relevant businesses. It was encouraging that the membership of the ACEA responded positively to the need for this major change, resulting in the emergence of a more robust and commercially-focused Association."

"Another fundamental change has been the relationships engineers have with clients. Engineers now need good

The Australian Consulting Engineering Industry in Retrospect (continued)

commercial understanding and project delivery skills, as well as good technical skills, better communication skills, better strategic skills and better business skills.”

“The ACEA of today therefore has made the transformation with its prime purpose intact. It continues to be the spokesperson and lobby group for privately owned consulting businesses.”

New Membership Support Structure and Culture for a New Millennium

From the heat of debate and the difficulties of changes there has emerged an ACEA whose structure, culture and corporate governance in the twenty first century differ substantially from those which characterised the Association over the last 50 years or so.

Just as the world of consulting engineering is changing, so too is the Association membership. Changes to ACEA's membership base have strengthened the organisation's business and industry orientation which has moved from being largely engineering professionals in business to an association of business firms. Changes to membership eligibility have embraced the new FIDIC definition of 'firms providing technological based intellectual consulting services for the built and/or natural environment.' This now means that the ACEA is gradually attracting membership and active participation from a wider spectrum of industry including non-engineering firms and nominated non-engineering professional representatives.

In 2001, many ACEA members are multinational firms which are being driven by global issues. To survive, they need representation and influence, so the ACEA's direction is shifting towards 'hard-nosed' professional services in order to meet these needs. Clients are increasingly demanding complete project packages in which engineering is only one part of an otherwise broad range of services. These services can also include financial feasibility, political and community negotiation, public relations, health and environmental planning, financial packaging, legal services and a variety of planning and management services. Smaller or sole proprietor consulting engineering businesses are meeting these challenges by occupying niche markets and developing specialisations as globalisation forces a need for change and diversification away from traditional engineering practice.

In the past, the value of the ACEA has been measured by its responsiveness and reaction as member firms sought guidance and assistance on current issues.

In today's climate, member firms who go through the immense pain of rationalisation expect that, like themselves, the ACEA will be 'ahead of the game,' proactive rather than reactive in supporting their business activities and delivering value for money with limited resources.

The Association's objectives are therefore moving from a model of essentially reacting to members' needs and developments in the industry, to more proactively focusing on leading edge activities which provide strategic value and wealth creation for the commercial interests of industry.

END

Appendix 1

The Association of Consulting Engineers Australia List of Presidents: 1952 to 2001

Years	President
1952 to 1954	Awdry F. Julius
1954 to 1956	A. W. Morrison
1956 to 1957	G. I. Davey
1957 to 1958	Ken A. Bond
1958 to 1960	R. F. McAskill
1960 to 1962	Frank G. Hole
1962 to 1964	Max B. V. Anderson
1964 to 1966	Gerry F. Cardno
1966 to 1968	R. L. Atkinson
1968 to 1970	Ken A. Bond
1970 to 1972	G. B. Hill
1972 to 1974	J. F. Keays
1974 to 1976	Dr Peter O. Miller AM
1976 to 1978	Harold C. Richards
1978 to 1980	Ben N. Fink
1980 to 1982	Eric B. Brier
1982 to 1984	Peter Hein
1984 to 1986	John B. Laurie
1986 to 1988	J. D. F. Snelling
1988 to 1990	Roy T. A. Hardcastle
1990 to 1992	James (Dale) McBean
1992 to 1994	John E. Miles
1994 to 1996	Richard (Dick) Kell AM
1996 to 1998	Grahame D. Campbell
1998 to 2000	Ray Young
2000 to 2002	David Singleton

Appendix 2

Acronyms and Abbreviations

ACCC	The Australian Competition and Consumer Commission
ACEA	The Association of Consulting Engineers Australia
ACENZ	The Association of Consulting Engineers New Zealand
ACS	The Australian Construction Service
ACSE	The Association of Consulting Structural Engineers of New South Wales
APEA	The Association of Professional Engineers Australia
BIAC	The Building Industry Advisory Council of New South Wales
BICC	The Building Industry Construction Council
CIDA	The Construction Industry Development Agency
DHC	The Department of Housing and Construction
DPW	The New South Wales Department of Public Works
FIDIC	The International Federation of Consulting Engineers
IANSW	The Institute of Architects of New South Wales
IE Aust	The Institution of Engineers Australia
MTEA	The Metal Trades Employers Association
NBCC	The National Building and Construction Council
NPWC	The National Public Works Conference
QBS	Qualification Based Selection
RAIA	The Royal Australian Institute of Architects
SAA	The Standards Association of Australia
VECAS	The Vietnam Engineering Consultants Association

Appendix 3

Bibliography and References

Corbett, A. H. *The History of the Institution of Engineers Australia: A History of the First Fifty Years 1919-1969.*

The Institution of Engineers, Australia in Association with Angus and Robertson (Publishers) Pty Ltd, 1973.

The History of the Association of Consulting Structural Engineers of New South Wales 1933-1993
Alan Milston, Compiler. Copyright ACSE of New South Wales:

Anderson, M. and Cochrane R. *Julius Poole and Gibson: The First Eighty Years. From Tote to CAD.*
Julius Poole and Gibson, 1989.

The ACEA in Tradepracticeland, ACEA, 1981

The ACEA Newsletter, (ACEA), 1964 - 1967

The National Newsletter, (ACEA), 1967 - 1974

Corporate News, (ACEA), 1993-1995

The Consulting Engineers' Newsletter, (ACEA), 1967 -1969

The Consulting Engineers' Quarterly, (ACEA), 1969 -1972

The Australian Consulting Engineer, (ACEA), 1972 -1993

The Consulting Engineer, (ACEA), 1993 -1995

Innovate, (ACEA), 1995 - 2000

National Outlook, (ACEA), 1995 - 2001

Minutes of ACEA Meetings, 1953 - 2001

NOTES

NOTES



**The Association of
Consulting Engineers
Australia**

ACN 064 052 615

**Level 12, 75 Miller Street,
North Sydney NSW 2060 Australia**

**PO Box 1002,
North Sydney, NSW 2059 Australia**

**Telephone: (02) 9922 4711
Facsimile: (02) 9957 2494
E-mail: acea@acea.aust.com
Web Site: www.acea.aust.com**



The Association of
Consulting Engineers
Australia